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Sincerely.

Jeffrey D. Rose, President

P.S. — Many systems simply require more space for data. Consider the lower hard drive prices on pages 36 & 37!

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#### The JDR Price Guarantee

If you purchased any item from JDR Microdevices in the last 30 days and we've lowered our price, call us with the details and we'll promptly refund the difference.

#### COMMENTS FROM OUR CUSTOMERS



... I wrote a letter describing what happened to your service department and I was very pleased to have the drive quickly replaced... I am continually impressed with your customer service... I plan to continue to order my parts and supplies from you... I can now add to my list of praises for JDR and your customer service...

Ken Goehring, Weed, CA





... Your company and its sales and support staff are the best I have dealt with in the six years I have been purchasing computer equipment by mail order. Your prices are competitive and you have the widest selection of high quality computer products I have found to date. I don't know why it took me so long to find your company...

David Schaefer, MD, Rochester, MI



#### **Motherboards**

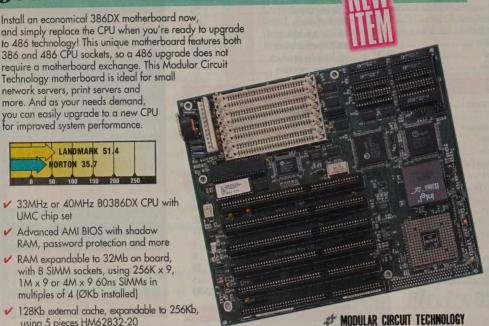
Socketed for 486 Upgrades 386/486 Cache Motherboard

and simply replace the CPU when you're ready to upgrade to 486 technology! This unique motherboard features both 386 and 486 CPU sockets, so a 486 upgrade does not require a motherboard exchange. This Modular Circuit Technology motherboard is ideal for small network servers, print servers and more. And as your needs demand, you can easily upgrade to a new CPU for improved system performance.



- ✓ 33MHz or 40MHz 80386DX CPU with UMC chip set
- ✓ Advanced AMI BIOS with shadow RAM, password protection and more
- RAM expandable to 32Mb on board, with 8 SIMM sockets, using 256K x 9, 1M x 9 or 4M x 9 60ns SIMMs in multiples of 4 (ØKb installed)
- ✓ 128Kb external cache, expandable to 256Kb, using 5 pieces HM62832-20
- ✓ Six 16-bit ISA expansion slots
- ✓ MS-DOS, Windows 3.1, DESQview 386, Novell NetWare and OS/2 compatible
- ✓ 10"L x 8-3/4"W for mini and full-sized cases

Note: 33MHz is recommended if you plan to upgrade CPU's!





ISA MCA EISA VESA PCI (Looks like secret code, doesn't it?)

If you aren't familiar, those are the acronyms for PC bus standards starting with the original PC up through the latest entries. Progressively, those standards improve throughput and PC efficiency for various I/O

It has been just about 24 months since I became convinced of the value of "yet another bus standard", and began following PCI's steady progress from idea to

Aside from its technical merits as a PC standard, PCI Aside from its technical ments as a PC standard, PCI has also become somewhat of a rallying point for a diverse group of PC competitors, as well as a focal point for other PC interconnect methods.

Examples to illustrate that point are PCI for the Power PC, and integrated chip designs that support PCI and PCMCIA. Even now efforts are underway to make

those two standards converge.

For the end user, this means "Volumes" in both senses of the word. Interest in building peripherals for PCI, and ever increasing sales guarantee diversity and

Today's best buy is still VESA compatible. However, if you consider the long range view, PCI will soon catch up, and should be strongly considered by most users. The fastest processors still twiddle their thumbs when I/O operations occur, and PCI will be the best solution to that problem for the next few years.

P.S. — Remember, you can't ride the bus unless you have a ticket!

P.P.S. — The MCA is a one-way ticket whose full potential will never be realized.

#### Intel Pentium<sup>TM</sup> **Processors**



The most advanced PC compatible processor extends performance while maintaining compatibility with existing software. Incorporating a superscalar architecture, the Pentium<sup>TM</sup> processor also features separate internal code and data cache, a 64-bit data bus and many other features

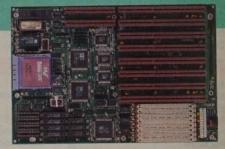
80586DX-60 1 lb 60MHz version for 5.0	volt systems	\$599.00
80586DX-66 1 lb 66MHz version for 5.0		\$749.00
80586DX-90 1 lb	) walt anatoms	\$849.00

30-Day Money-Back

#### 66MHz 486DX2 EISA VESA Local Bus Motherboard

Now you can increase your system's performance by combining VESA Local Bus, EISA and ISA cards all together with a fast 66MHz 486DX2 CPU! You'll get compatibility with all three bus types by upgrading to this motherboard. You can add a VESA Local Bus VGA card for the fastest video response, an EISA SCSI-2 controller for blazing disk transfers and keep your existing ISA cards to save money. When you need faster performance, simply replace your slower ISA cards with faster VESA Local Bus or EISA cards! The fast bus performance and speedy 486DX2 CPU make this board ideal for data and graphics applications, including high-capacity network servers, desktop publishing, graphics workstations, number crunching and more.

- ✓ 66MHz Intel 80486DX2 CPU featuring an internal math co-processor and 8Kb internal cache memory
- Advanced AMI BIOS with EISA extensions
- ✓ SIS chip set
- RAM expandable to 128Mb using up to 8 SIMMs, (ØKb installed)
- ✓ Uses 256K x 9, 1M x 9, 4M x 9 or 16M x 9 60ns SIMMs in multiples of 4
- ✓ 128Kb external cache, expandable to 256Kb
- Eight 32-bit EISA slots, 2 also include VESA Local Bus connector



MODULAR CIRCUIT TECHNOLOGY



- MS-DOS, Windows 3.1, DESQview, Novell NetWare and OS/2 compatible
- ✓ Dallas Semiconductor CMOS clock with battery backup, ISA and EISA configuration memory, manual and installation instructions
- Up to 33Mb/sec for 32-bit VESA Local Bus and EISA bus, plus 8Mb/sec for 8/16-bit ISA bus
- ✓ 13"L x 8-3/4"W with holes for mini and full-sized cases

MCT-M486EV-66 5 lbs ..... \$719.00

Cooling Fans

Make your 486 CPU run cooler with this specially designed fan. It features easy snap-in installation so you don't have to remove your CPU from the motherboard. In-line adaptor taps power from your floppy drive power cable.



486-FAN 1 lb .....

\$29.95

#### Refrigeration Fan

This 486 fan includes an active electronic refrigeration unit that operates as a heat pump, efficiently drawing harmful heat away from your CPU! Fast, easy installation.



486-FAN-R 1 lb

33MHz 386SX Motherboard

Advanced 386SX technology has never been more affordable! This mini-sized motherboard uses an AMD 33MHz 80386SX CPU to provide you with full 32-bit multitasking compatibility. This motherboard is an economical choice for getting started in the Windows environment.

- ✓ 33MHz 80386SX CPU with ALI chip set
- Advanced AMI BIOS with shadow RAM, password protection, drive boot-up sequence, keyboard repeat rate and more
- RAM expandable to 16Mb on board, with 4 SIMM sockets, using 256K x 9 1M x 9 or 4M x 9 60ns SIMMs in multiples of 2 (ØKb installed)
- ✓ Socketed for 33MHz 80387SX or compatible math co-processor
- ✓ Six 16-bit expansion bus slots
- MS-DOS, Windows 3.1, DESQview 386, Novell NetWare and OS/2 compatible
- ✓ 6-3/4"L x 8-1/2"W for mini and full-sized cases

MCT-M386SX-33 3 lbs ...... Landmark 25.0, Norton SI 16.5

**MODULAR CIRCUIT TECHNOLOGY** 

Motherboards

MCT-M386SX-40 3 lbs Landmark 30.3, Norton SI 17.3

**Toll-Free Technical Support** 

Serving You

**Toll-Free FAX Ordering** 

800-538-5005

**Outstanding System Performance!** 

#### VESA Local Bus 486 Motherboards

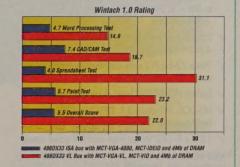
Featuring a 32-bit VESA Local Bus for quick data transfer, this upgrade allows your CPU to share information with two other interfaces at speeds up to 33MHz. The 32-bit architecture bus allows more data per cycle! Standard 8 and 16-bit ISA cards plug right into the motherboard! If you need faster graphics, just plug in MCT's VESA Local Bus VGA card.

- ✓ 66MHz Intel 80486DX2, 33MHz Intel 80486DX or 33MHz Intel 80486SX CPU; UMC chip set
- ✓ ZIF CPU socket for processor upgrades
- ✓ Advanced AMI BIOS with shadow RAM, password protection and more
- RAM expandable to 32Mb on board, with 8 SIMM sockets, using 256K x 9, 1M x 9 or 4M x 9 60ns SIMMs in multiples of 4 (ØKb installed)
- ✓ 128Kb external cache, expandable to 256Kb using 5 pieces HM62832-20
- Eight 16-bit expansion bus slots, two with VESA local bus slots
- MS-DOS, Windows 3.1, DESQview 386, Novell NetWare and OS/2 compatible
- 13-1/4"L x 8-3/4"W for mini and fullsized cases

\$499.95 



**MODULAR CIRCUIT TECHNOLOGY** 



LANDMARK 222.0

### **Motherboards**

#### 110 Alert Temperature Alarm





about your system running too hot? This

device monitors your computer system's temperature and sounds a loud alarm if the internal temperature exceeds 110 degrees Fahrenheit! You'll be warned of inadequate cooling, and have time to prevent damage. When the temperature returns to normal, the alarm automatically resets.

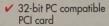
- Alarm sounds if case temperature reaches 110 degrees Fahrenheit
- Compact sensor mounts by using included double-sided tape
- ✔ Draws power from a drive cable
- ✓ Automatic shut-off and reset feature
- ✓ Includes manufacturer's lifetime warranty

110-ALERT 1 lb ...... \$29.95

#### Also Supports SCSI & Fast SCSI-2 Devices!

#### Fast PCI SCSI-3 Controller

Connect up to 15 devices using this high-performance SCSI controller. It supports SCSI-3, Fast SCSI-2 and SCSI devices, making it ideal for both your existing devices and new technology to follow. The card also features tagged command queuing and multi-threaded I/O to efficiently support advanced multitasking operating systems.



- ✓ Supports up to 15 Wide SCSI-3 devices or up to 7 SCSI / Fast SCSI-2 devices
- ✓ Wide data burst transfer rates up to 20Mb/sec in synchronous mode
- ✓ Supports CAM, ASPI and INT13 interfaces to third party applications
- Features advanced multithreaded I/O, tagged command queuing and disconnect/reselect capability
- ✓ Compatible with DOS, Windows, OS/2, NetWare, Windows NT, SCO Unix and more
- ✓ Includes cable for 2 internal SCSI / Fast SCSI-2 devices

MCT-PSCSI3 2 lbs ...... \$179.95



**MODULAR CIRCUIT TECHNOLOGY** 

Tech Tip

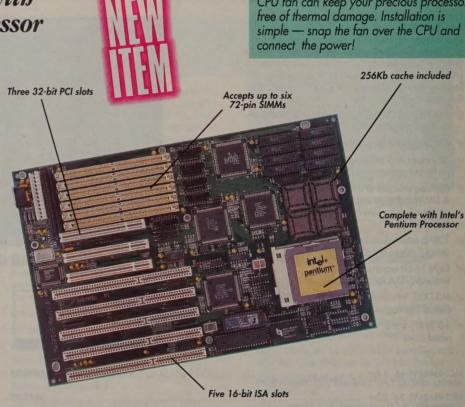
If your system is fully loaded or it operates in a warm environment, the electronic components are more susceptible to thermal damage. In many instances, a CPU fan can keep your precious processor free of thermal damage. Installation is simple — snap the fan over the CPU and connect the power!

Upgrade to a PCI Motherboard & 64-Bit CPU!

#### 66MHz Motherboard with Intel's Pentium™ Processor

Now you can upgrade your system to a powerful 66MHz Pentium<sup>TM</sup> Processor! By replacing your existing motherboard, you'll get three PCI Local Bus slots and five 16-bit ISA slots. Use the PCI slots to improve video or hard disk performance, and plug your existing cards in the remaining ISA slots. A high-performance SCSI-2 controller is integrated on the motherboard, so you can improve the transfer rates of your compatible drives without buying a new hard drive controller!

- ✓ 66MHz Intel Pentium Processor with 16Kb internal cache memory
- ✓ Intel chip set
- Award BIOS supports shadow RAM, password protection, virus detection and more
- ✓ RAM expandable on board to 192Mb, with 6 SIMM sockets, using 1M x 36, 2M x 36, 4M x 36 or 8M x 36 7Ons SIMMs in multiples of 2, (ØKb installed)
- 256Kb cache expandable to 512Kb using 4 pcs MCM67B618FN
- ✓ Three 32-bit PCI slots and five 16-bit ISA slots;
  seven slots maximum available.
- ✓ Built-in PCI SCSI-2 hard drive controller
- MS-DOS, Windows 3.1, DESQview 386, Novell NetWare and OS/2 compatible
- ✓ 13"L x 8-1/2"W for mini and full-sized cases



**MODULAR CIRCUIT TECHNOLOGY** 

#### Motherboards





The highly-sophisticated Pentium

Processor produces a tremendous amount of heat. And due to the higher voltage requirements of the 60 and 66MHz CPUs, they produce more heat than the faster 90MHz version! Protect your processor from potential thermal damage with these fans. An in-line power adaptor taps power from your floppy drive.

586-FAN-R 1 lb	\$79.95
P54C-FAN 1 lb	\$29.95
P54C-FAN-R 1 lb	\$79.95

#### Customer Testimonial

"... It isn't too often that good support comes along with many of the hardware and software vendors... But I must say your staff is, in my opinion, way out in front of the pack! That's one of the reasons why there are a lot of repeat business callers..."

- S. Garis, Allentown, PA

#### **Cooling Fans** for Pentium Processors

### 18.8M

✓ 32-bit PC compatible PCI card

PCI Bus from Modular Circuit Technology!

1280 x 1024 Super VGA Card

When upgrading your system to the fast PCI Local Bus, be sure to use a PCI video card! Modular Circuit Technology's fast PCI card features a Cirrus Logic Windows Accelerator chip to further boost your graphics performance. Your system will quickly update the screen, and the pallet of up to 16,000,000 colors will produce more shades, hues and tones than your eyes can distinguish! You'll get fast Windows updates, even when viewing photo-realistic images!

- ✓ Supports interlaced and non-interlaced analog or multisynch monitors
- Resolution: 1280 x 1024 in 16 colors, 1024 x 768 in 16/256 colors, 640 x 480 in up to 16M colors
- ✓ Refresh rates up to 75Hz in 1024 x 768 NI mode; VESA compatible video modes
- ✓ 1Mb DRAM installed
- ✓ Uses Cirrus Logic GD5430 chip set
- ✓ 15-pin high-density D-SUB for analog output and 26-pin VESA-compatible expansion port
- Automatic mode switching for VGA, EGA, CGA, MDA, HGC and 132-column text



✓ Includes software drivers for AutoCAD, Lotus 1-2-3, Word, WordPerfect and more

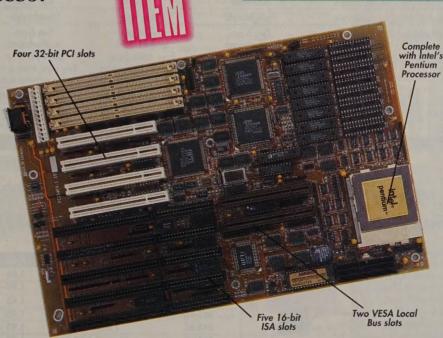
MCT-VGA-PCI 2 lbs	\$159.95
MCT-PVGA-2 2 lbs	\$249.95
2Mb PCI card with S3 Vision 864 chip	set,
WinMark=59.4M	

PCI and VESA Local Bus Interfaces!

#### 90MHz Motherboard with Intel's Pentium" Processor

When we tested this motherboard, we were surprised to see it performed 2.3 times faster than our 66MHz 486DX2 motherboard! You'll want to add this powerhouse to your system too! The motherboard not only provides more power, it also saves power because it supports the EPA's Energy Star program. Not sure whether VESA Local Bus or PCI Local Bus is right for you? This motherboard supports both standards. And if you already have a VESA Local Bus system, this motherboard will accept up to two VLB cards! A new graphical CMOS utility makes setup easier than ever, and it even supports your serial mouse!

- 90MHz Intel Pentium Processor with 16Kb internal cache memory
- ✓ OPTi chip set
- ✓ AMI BIOS features graphical user interface and Energy Star support, plus it supports shadow RAM, password protection, virus detection and more
- RAM expandable on board to 128Mb, with 4 SIMM sockets, using  $1M \times 36$ ,  $2M \times 36$ ,  $4M \times 36$  or  $8M \times 36$  70ns SIMMs in multiples of 2, ( $\emptyset$ Kb installed)
- ✓ 256Kb cache expandable to 512Kb using 8 pieces HM62832-20
- Four 32-bit PCI slots and five 16-bit ISA slots; 2 ISA slots support VESA Local Bus; eight slots maximum available



 MS-DOS, Windows 3.1, DESQview 386, Novell NetWare and OS/2 compatible

✓ 13"L x 8-1/2"W for mini and full-sized cases

**MODULAR CIRCUIT TECHNOLOGY** 

MCT-M586-90 4 lbs ..... Landmark 519, Norton SI 285

## System Basics

#### Power Supply Upgrades!

Each of our U/L-approved power supplies is designed to provide your system with clean, reliable power! Since most designers did not expect systems with 300Mb hard drives and 16Mb or more of RAM, chances are your original power supply was just not designed to

Upgrade to one of these more powerful units and get well-regulated power, which can prevent an unexpected system failure. Each supply includes built-in overload protection to guard your system's components, a low-noise fan for comfort and a 6' AC power cord.



#### Universal Case Hardware

Are you going to find the screws and other hardware you need for your upgrade? Be prepared to do the job right with this assortment of frequently used parts. The kit combines screws with motherboard standoffs and washers. We even include a JDR screwdriver!

CASE-HDW 1 lb ......\$2.95

1000						
PART #	PS-150	PS-200X	PS-200	PS-230	PS-250	PS-250TW
Output	+5V @ 17A, +12V @ 6A, -5V @ 0.5A, -12V @ 0.5A	+5V @ 20A, +12V @ 8A, -5V @ 0.5A, -12V @ 0.5A	+5V @ 20A, +12V @ 8A, -5V @ 0.5A, -12V @ 0.5A	+5V @ 23A, +12V @ 9A, -5V @ 0.5A, -12V @ 0.5A	+5V @ 25A, +12V @ 10A, -5V @ 0.5A, -12V @ 0.5A,	+5V @ 25A, +12V @ 10A, -5V @ 0.5A, -12V @ 0.5A,
Power	150 watts	200 watts	200 watts	230 watts	250 watts	250 watts
Cases	8088 style	8088 style	286 style	Mini style	286 style	Upright style
Connectors	Two 6-pin motherboard, Four 4-pin drive	Two 6-pin motherboard, Four 4-pin drive				
Input	110/220V, 50/60Hz	110/220V, 50/60Hz				
Switch	Right side	Right side	Right side	Button on 21"cord	Right side	Toggle on 28" cord
Size	5"H x 8-3/4"W x 5-1/2"D	5"H x 8-3/4"W x 5-1/2"D	6"H x 9"W x 6"D	3-1/2"H x 6"W x 5-1/2"D	6"H x 9"W x 6"D	6"H x 8-1/2"W x 6"D
Price	\$69.95	\$89.95	\$89.95	\$99.95	\$129.95	\$129.95

PART#	PS-300	PS-300TW	PS-300B	PS-450TW
Output	+5V @ 25A, +12V @ 14A, -5V @ 0.5A, -12V @ 0.5A	+5V @ 25A, +12V @ 14A, -5V @ 0.5A, -12V @ 0.5A	+5V @ 25A, +12V @ 14A, -5V @ 0.5A, -12V @ 0.5A	+5V @ 45A, +12V @ 17A, -5V @ 1.0A, -12V @ 1.5A
Power	300 watts	300 watts	300 watts	450 watts
Cases	286 style	Upright style	Mini style	Upright style
Connectors	Two 6-pin motherboard, Four 4-pin drive	Two 6-pin motherboard, Four 4-pin drive	Two 6-pin motherboard, Four 4-pin drive, Two mini 4-pin drive	Two 6-pin motherboard, Six 4-pin drive Two mini 4-pin drive 2-pin fan w/temp sense
Input	110/220V, 50/60Hz	110/220V, 50/60Hz	110/220V, 50/60Hz	110/220V, 50/60Hz
Switch	Right side	Toggle on 28" cord	Toggle on 24" cord	Toggle on 48" cord
Size	6"H x 9"W x 6"D	6"H x 8-1/2"W x 6"D	3-1/2"H x 6"W x 5-1/2"D	6"H x 8-1/2"W x 6"D
Price	\$149.95	\$149.95	\$149.95	\$299.95



PS-300TW





## PS-230

#### Lithium Battery

Tadiran number TL-5293W, the universal replacement 6 volt lithium battery for most 286/386/486 PCs. Shipping weight 1 lb.



LITHIUM-6V	\$10.95	
LITHIUM-3.6V 3.6 volt battery	\$9.95	

#### PC Brackets

Add additional connectors to cases without enough cut-outs or combine several connectors and save slots. Shipping weight 1 lb.

Part #	Pattern	Price
BKT-2	1 x DB25	1.95
BKT-4	DB09 & DB25	1.95
BKT-8	DB15 & DB25	1.95
BKT-8B	2 x DB15	1.95
BKT-8C	1 x DB15	1.95
BKT-10	None (solid)*	1.95
BKT-12	1 x DB09	1.95
BKT-13	1 x DB37	1.95
BKT-14	2 x DB09	1.95

\*Note: With right-angle PC Board mount tabs

#### Nylon PCB Spacers

Fits between motherboard and case. Provides insulated mounting post. Choose from three styles.



Part #	"A"	Price
LCBS-6	.25"	.15
LCBS-10	.40"	.20
LCBS-12	.50"	.20
ACBS-6	.25"	.15
SCB-6	.25"	.20
SCB-10	.40"	.20

#### Multimedia Case

This multimedia case includes built-in speakers and a 15 watt power amplifier, keeping more of your components together in one compact case! A front panel volume control provides a quick, convenient means for adjusting sound levels.



- ✓ 15 watt stereo amplifier powers two built-in 3" x 5" oval speakers
- ✓ Two external 5-1/4" and one 3-1/2" drive slots
- Three internal 3-1/2" drive slots
- Accommodates mini sized motherboards
- ✓ Includes cutouts for eight card slots, two DB25 and two DB09 connectors
- ✓ 200 watt power supply included
- Switches for power-on, turbo and reset plus volume control mounted on front panel for convenient access
- LEDs indicate power, turbo and hard disk status
- √ 7-1/4"H x 15-1/2"W x 17-1/4"D case

CASE-75MM 30 lbs	\$199.95
PS-230 6 lbs	. \$99.95
Replacement power supply	



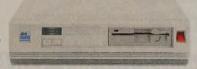
CASE-45



CASE-65

#### System Basics Desktop Cases

Save precious desktop space or increase your system's capacity with JDR's desktop cases. Our variety of sizes and configurations are designed to fill your needs now and in the future. The CASE-10 is a low-profile case designed for workstation applications. An included T-Bus adaptor mounts the interface cards horizontally to reduce case height. The CASE-60 is a high-capacity unit designed with plenty of external drive slots. It's ideal for systems that require two floppy drives, a tape drive, a CD-ROM drive and perhaps our new PCMCIA interface adaptor. Each case includes a manual, cables, mounting hardware and speaker.



CASE-10

PART#	CASE-10	CASE-65	CASE-45
External Drive Slots	One 5-1/4", One 3-1/2"	Two 5-1/4", One 3-1/2"	Three 5-1/4", Two 3-1/2"
Internal Drive Slots	One 3-1/2"	One 3-1/2"	Two 3-1/2", 1" high
Motherboard	Mini size	Mini size	Mini size
Size	4-1/2"H x 17"W x 15-3/4"D	6-1/2"H x 17"W x 17"D	6-1/2" H x 17-1/4" W x 16-3/4" D
Card Slots	Five	Eight	Eight
Cutouts	None	Two DB25, four DB09	Two DB25, Two DB09
Power Supply	Includes 200 Watt	Includes 230 Watt	Uses PS-230
Switches	Power-on, turbo & reset	Power-on, turbo & reset	Power-on, turbo & reset
LEDs	Power-on, turbo & hard disk	Power-on, turbo & hard disk	Power-on, turbo & hard disk
PRICE	\$129.95	\$169.95	\$69.95

## CASE-150 CASE-175 CASE-130 CASE-120A

Clear Your Desk with **Upright Case Upgrades!** 

> Why waste precious desk space when you can convert your system to an upright case? These uprights use less desk space than conventional desktop models, and you can easily place your system on the floor for more room! The larger upright cases are ideal for high-capacity power systems requiring room for several hard drives, floppy drives, tape drives, CD-ROM drives, etc. The larger size also improves air flow around your valuable cards and peripherals, so they will keep cool and last longer. Each case has a steel frame and tip-resistant wide hase

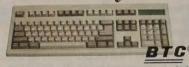
The same of the sa			ip resistant wide base.			
PART #	CASE-120A	CASE-130	CASE-150	CASE-175	CASE-200A	
Ext. Drive Slots	Three 5-1/4", One 3-1/2"	Two 5-1/4",Two 3-1/2"	' Four 5-1/4"	Four 5-1/4", One 3-1/2"	Five 5-1/4"	
Int. Drive Slots	None	One 3-1/2"	Two 5-1/4" or Three 3-1/2"	Three 3-1/2"	Six 5-1/4"	
Motherboard	Mini size	Mini size	Mini or full size	Mini size	Mini or full size	
Size	12"H x 8"W x 16"D	13-3/4"H x 7"W x 17"D	25"H x 7-1/2"W x 16-3/4"D	19-1/4"H×7-3/4"W ×16-1/2"D	24-3/4"H x 8-1/2"W x 20-1/2"D	
Card Slots	Six	Eight	Eight	Eight	Eight	
Cutouts	Three DB25 Two DB09	One DB25 One DB09	Four DB25 Four DB09	Two DB25 Two DB09	Eight DB25 Eight DB09	
Power Supply	Uses PS-230	Uses PS-230	Includes 250 Watt	Uses PS-230	Uses PS-250TW or PS-300TW	
Switches	Power-on, turbo & reset	Power-on, turbo & reset	Power-on, turbo & reset	Power-on & reset	Power-on, turbo & reset	
LEDs	Power-on, turbo, 2-digit speed & hard disk	Power-on, turbo & hard disk	Power-on, turbo & hard disk	Power-on, turbo & hard disk	Power-on, turbo, 2-digit speed & hard disk	
PRICE	\$69.95	\$79.95	\$249.95	\$79.95	\$299.95	

#### Upgrading and Fixing PCs for Dummies



This book demon strates cheap and painless methods for reviving your old, tired PC. Full of concise, clear, easy-tofollow instructions, this book will provide a fun and easy way to upgrade and repair your system. This computer first-aid kit includes a section for installing memory, fixing disk drives and a lot more! 1 lb.

#### System Basics Enhanced Keyboard



This BTC keyboard takes up less space on your desk without compromising your typing speed! BTC has created a smaller keyboard without changing the size or position of the keys. Plus you get all the important full-sized features like 12 function keys, status LEDs and full-sized enter, shift and control keys.

- ✓ PC compatible keyboard
- Enhanced 101-key layout with large return key, macro key, separate numeric, cursor keypads and 12 function keys

- ✓ LED indicators for scroll, caps and number lock
- ✓ Includes 4' coiled cord w/ 5-pin male DIN
- ✓ 18-1/2"L x 7"W x 1-1/2"H

BTC-5339R 4 lbs	\$49.95
BN-52066 1 lb Keyboard skin for BTC-5339R	\$14.95
KBD-101B 5 lbs	\$69.95
BTC-SPAN 3 lbs Spanish language keyboard	\$99.95
BTC-FR 3 lbs French language keyboard	\$99.95
BTC-RUS 3 lbs	\$99.95

#### **Keyboard Drawer**

Increase your usable desk space! This handy keyboard drawer lets you slide your keyboard under your computer or monitor to free up valuable desk space.



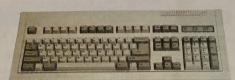
- Sturdy metal with slide-out drawer
- ✓ Fits most standard keyboards
- ✓ Approx. 15-1/2"L x 22"W x 3-3/8"H

KBD-DRAWER 13 lbs ...... \$29.95

#### Enhanced 101-Key "Click" Keyboard

This keyboard was designed with the speed typist in mind. It provides both tactile and audible feedback to make it feel more like a typewriter. The keys are slightly angled for faster access, and thus faster input. Separate numeric and cursor keypads for greater functionality. For PC compatibles.

- ✓ Enhanced 101-key layout
- ✓ Large return, shift, and caps lock keys
- Separate numeric and cursor keypads with 12 function keys located at top
- ✓ Mechanical type key switches with tactile
- ✓ LED indicators for scroll, caps and number lock



- ✓ Includes 4' coiled cord with 5-pin male DIN and manual
- ✓ 18-1/2"L x 7"W x 1-1/2"H

K104-A 5 lbs	. \$79.95
BN-52255 1 lb	
Keyboard skin for K104-A	

#### Low-Cost Wrist Rest



Set this 1" thick pad in front of your keyboard to elevate your wrists and reduce strain.

WRST-1 1 lb	. \$9.95
WRIST-REST 2 lbs	\$29.95
Deluxe version	

#### Programmable Keyboard



Program the macros in this keyboard to perform repetitious steps in your applications--then just use one keystroke to execute hundreds of others!

- ✓ PC compatible Maxi Pro-II keyboard
- Enhanced 101-key layout with 124 keys total, 121 programmable; 22 function keys; large return key, macro key; separate numeric and cursor keypads
- Swap or program keys to execute macros totaling up to 1,800 characters, including delays and repeats

MAXI-MEMPRO 6 lbs ......\$99.95

#### Scan-One Bar Code Scanner

This scanner reads common bar code formats into your computer system, so you don't have to manually enter the data. It reduces data entry errors by reading information from a bar code, rather than relying on someone to key the data in accurately.



- Supports UPC-A, UPC-E, EAN/JAN-8, EAN/JAN-12, Code 3 of 9, Codabar, Code 93, Interleaved 2 of 5 and other bar codes
- ✓ Uses serial port COM1 COM2
- Checksum, system digit and other data options configurable

SCAN-ONE 2 lbs	\$169.95
WEDGE-ONE 3 lbs	\$269.95
Above wand with in-line keyboard plug	
(no I/O port required)	

#### 101-Key Keyboard

This responsive keyboard from Maxi Switch features an enhanced layout and soft feel to help make inputting less of a chore! LEDs highlight scroll, caps and number lock. Separate numeric and cursor keypads improves efficiency.



#### Marai Swittelh

- ✓ For PC compatible systems, 8088 compatible
- ✓ 101-key enhanced layout
- ✓ 12 function keys
- ✓ LED indicators for scroll, caps and number lock
- ✓ Large return key, separate numeric and cursor keypads

#### Microsoft Natural Keyboard



Work comfortably through more natural positioning with Microsoft's new keyboard! This split keyboard features a built-in palm rest and a sloped, split-key design for less stress to your wrists. The standard key layout minimizes time to adapt to new hand positioning.

- PC compatible keyboard features new graphical Task Manager for Windows 3.1
- ✓ 12 function keys plus 2 new keys for more efficient Windows use
- ✓ LED indicators for number lock, caps and scroll
- ✓ Complete with tips for reducing strain

MS-KBD 6 lbs ...... \$99.95

#### System Basics

#### Power/Modem Surge Suppressor

Protect your computer from power surges in both your power and phone lines. This 1,875 watt, 120VAC U/L listed surge protector protects against spike currents as high as 4,500 Amps. 6-ft. power line cord; lighted power switch.

PWR-100 3 lbs ...... \$29.95

#### Surge Suppressor

Protect your valuable equipment against damaging power surges with our UL-approved surge suppressors. For use with 15 Amp maximum load, 1875 watts. Metal construction w/ 6-ft. )-3 D-3 B-3 heavy-duty cord.

POWER-SURGE 2 lbs ...... \$9.95

#### **BAR-ONE** Bar Code **Printing Software**

Produce labels for letters, diskettes and stock stickers with this easy-to-use program. Simply place your bar codes and text in the position you want on screen.



- Supports UPC-A, UPC-E, EAN/JAN-8, EAN/JAN-12, Code 3 of 9 and Zip+4 bar codes
- Works with serial and parallel port printers
- Compatible with HP LaserJet, HP InkJet, Epson, IBM and compatible printers

BAR-ONE 2 lbs	\$69.95
BAR-ONE-W 2 lbs	\$69.95

#### Tripp Lite Isobar Premium Surge Suppressors

Isobar surge suppressors are known for superior protection. Protect your equipment from damaging and destructive EMI & RFI line noise. Each pair of outlets is isolated from the others, preventing connected equipment from interacting with oneanother. The Isobar series includes Tripp Lite's \$10,000 Ultimate Lifetime Insurance for equipment plugged into a correctly installed Isobar surge suppressor.

- ✔ Provides surge suppression, up to 13,000 Amp
- Cascaded circuitry allows choice of noise
- ✓ Isolated banks eliminate interference between devices plugged into Isobar
- Multicomponent circuitry includes MOVs, toroid chokes and VHF capacitors

ISOBAR4	4 outlet, 2 lbs	\$45.95
ISOBAR6	6 outlet, 3 lbs	\$55.95
ISOBAR8	8 outlet, 3 lbs	\$69.95
ISOBAR4U	J 2 lbsth diagnostic indicators	\$49.95
ISOBAR6L 6 outlet wi	J 3 lbsth diagnostic indicators	\$59.95

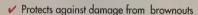




As above with phone line protection	\$64.95
POWERMISER 3 lbs	\$69.95
onide subbressor antomatically turns monitor o	rr when

Tripp Lite Standby UPS Systems

These battery backup systems protect your equipment from brownouts, blackouts and AC transients. Every system includes large batteries for longer backup times. The 500VA and larger units include a network output port to signal when a power failure has occurred (requires optional software below). Includes Tripp Lite's \$25,000 Ultimate Lifetime Insurance for equipment plugged into a correctly installed BC series UPS.



- ✓ Spike and RFI/EMI filtering prevents line noise problems
- Audible alarm warns you when the AC has failed
- Phase synchronized transfer times are less

man zms	
<b>BC250</b> 15 lbs	\$119.95
<b>BC400</b> 21 lbs	. \$199.95
BC500LAN 24 lbs	. \$229.95
BC900LAN 41 lbs	. \$429.95
BC1250LAN 67 lbs	. \$549.00
BC-NOVELL 1 lb	\$59.95



#### On-Line Series UPS

Dual-converter UPS' feature zero transfer time, so no switching takes place. Includes Tripp Lite's \$75,000 Ultimate Lifetime Insurance for equipment plugged into a correctly installed On-Line series UPS.

<b>PS4.5</b> 28 lbs	\$549.00
PS6.0 33 lbs	\$599.00
600 VA, 400 watt output PS9.0 37 lbs	\$749.00
900 VA 540 watt output	3/47.00

Tech Tip

If you find yourself looking for an empty power plug, consider adding a power strip with surge suppression. You'll protect your equipment from damaging power surges, and the built-in circuit breaker prevents circuit overload!

#### **System Basics** Summa Bit Pad Plus

This PC-compatible digitizing tablet allows you to trace outlines, maps, diagrams and other graphical information for storage in your computer system. It can also be used to produce freehand drawings, unlike a mouse or trackball. It's ideal for graphics design, architecture, engineering, CAD/CAM and desktop publishing applications.

- PC compatible tablet
- √ 12" x 12" active tablet area fits standard 8-1/2" x 11" paper
- ✓ Highly accurate 1000 LPI resolution
- ✓ Uses serial port COM1-COM2
- ✓ Includes female DB09 connector and DB25 adaptor
- ✓ Includes 4-button puck, interface cable, power supply, document clips and manual

SUMMA12 15 lbs ..... 

#### Includes OCR Software! Sheet-Feed Scanner

Scan a full page of text and graphics into your computer! This scanner provides the tools necessary to scan up to an 8-1/2" x 14" sheet of paper in a single pass! The included Optical Character Recognition software can automatically convert the scanned image into text for use in popular file formats.

- ✓ 8-bit PC compatible ISA card requires Windows 3.x
- ✓ HP ScanJet Plus compatible scanner

UMAX

**Flatbed** 

- ✓ 300 DPI resolution and 256 gray scale scanning
- ✓ Supports TIFF, EPS, BMP, GIF and PCX formats
- Stitch function joins multiple images together



- ✓ Scans pages up to 8-1/2" x 14"
- ✓ Includes iPhoto Plus graphics software and Interpreter OCR software for Windows 3.x

SF-3GS 6 lbs	\$299.95
SF-6CP 6 lbs	\$499.95
24-bit color version of above scans up to 600	DPI

#### 800 DPI 256 Gray-Scale Scanner!

#### Low-Cost Hand Scanner

Quickly scan your images and text for high-resolution output! This unit scans up to 800 dots per inch, making it ideal for today's high-resolution laser printers. With 256 gray-scale output, you can easily scan a photo and integrate it into your newletter, manual or other publication. Included image editing software rotates, sharpens, smooths

- 8-bit PC compatible ISA card
- ✓ Up to 800 DPI and 256 gray scale capability
- ✓ Scans images up to 4.1 inches wide
- ✓ Virtual memory management allows large, highresolution images
- ✓ Includes Recognita's GO-CR Optical Character Recognition (OCR) software for Windows 3.x
- ✓ Complete with Prolmage image scanning and image editing software for Windows 3.x
- ✓ Software provides deskew, rotate, sharpen, smooth and other transformations

HAND-SCANNER 4 lbs ...... \$99.95

#### Acecad 12" x 12"

#### **Graphics Tablet**

With 0.01" accuracy, 1016 LPI resolution and adjustable slope. SummaGraphics, Calcomp 2000, Microsoft Software Mouse and Mouse Systems Mouse emulation modes.



D-9000 8 lbs	\$199.95
D-9000-PEN Stylus pen, 1 lb	\$29.95
D-8000 12 lbs	\$399.95
12" x 18" graphics tablet with pen	

#### Acecat II 5" x 5" Tablet

Use this laptop-sized digitizing tablet to replace your mouse or other pointing device. Simply point on the lightweight tablet, rather than rolling around to position your pointer. The Acecat II features WINTAB compatibility, allowing coexistence with another pointing device, such as a mouse or trackball in Windows applications.

- ✓ PC compatible tablet
- ✓ WINTAB compatibility allows concurrent use with a mouse
- √ 5" x 5" adjustable active area; 2000 LPI resolution
- ✓ Uses serial port COM1 COM2
- Emulates Microsoft Mouse, Mouse Systems Mouse and MM1201
- ✓ Includes tablet, 2-button pen and driver software

ACECAT 4 lbs ......\$109.95



productive" go together. Some of the laziest people are among the most productive because they search for the easiest and fastest ways to get the job done. And, buying the least expensive tool that will get the job done isn't necessarily cost effective.

Many computer users, for both business and personal use, need a document scanner. Whether it is used as a front end for a built-in FAX, method of tracking business cards, entry point for news clippings, or as the starting point for artistic efforts, scanners fill a niche. starting point for artistic etforts, scanners till a niche.

Many of the people who start out with a hand-held soon discover other uses they hadn't considered when they first made their choice. If you anticipate frequent need for images wider than 4 inches, I think you will greatly benefit from a flat bed scanner.

If all you care about are business cards, signatures

and small pictures, then you can be very happy with a small hand held.

As the line between "Desktop Publishing" and "Word Processing" becomes more and more blurred, embedding scanned images gets easier and more

The benefit to you is a better looking finished document, and improved communication. A picture is still worth a thousand words. Do you think you would be looking at pages 16 & 17 if this catalog didn't have lots of pictures?



system with line-art, halftone, grayscale and color scanning capability. Plus, with the included Omni PageDirect OCR software, you can convert text for use in your word processor.

- ✓ 8-bit PC compatible ISA card requires Windows 3.1
- ✓ 1,200 DPI maximum resolution
- ✓ 24-bit system scans over 16,000,000 colors
- ✓ Scans up to 8-1/2" x 14" documents
- ✓ Includes Adobe Photoshop LE and Omni PageDirect OCR software

UMAX-UC630LE 15 lbs ...... \$649.00

#### IDR's Trackball Low-Cost Space Saver!

This trackball gives you all the features of more expensive models for just \$29.95! This compact right hand design uses less space than a mouse, and since the ball never touches your desk, you don't have to worry about desktop dirt causing erratic movement!

- PC, DOS 6.0, Windows 3.x. Microsoft and PC Mouse compatible
- ✓ Uses serial port COM1 COM2
- ✓ Adjustable 50-800 DPI resolution
- ✓ Includes mouse driver and pop-up menu software
- 5-foot cable with female DB09 connector and adaptor for 25-pin serial port

#### IDR's

#### 3-Button Mouse

Our low cost 3-button mouse is an Outstanding Value at \$14.95! The optomechanical mouse is compatible with most mouse-oriented software including Windows 3.1. It includes switch-selectable Microsoft Mouse and Mouse Systems modes and comes complete with mouse drivers.

- ✓ PC, DOS 6 and Windows 3.x compatible
- ✓ Switch-selectable Microsoft Mouse and Mouse Systems modes
- ✓ 290 DPI resolution, software selectable up to 1450 DPI
- ✓ Uses serial port COM1-COM4
- ✓ 5' cable with female DB09 connector
- ✓ Mouse driver software included

JDR-MOUSE-3 2 lbs .....

LOCITECH

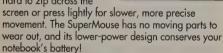
## ScanMan Model 256 LOCATECH

ScanMan 256 has Autostitch software to automatically join several passes into a full-page image, and FotoTouch image editing software for touch up.

SCANMAN-256 6 lbs ......\$189.95 **SCANMAN-256OR** 7 lbs \$229.95 Above with OCR software

#### SuperMouse **Pointing** Device

The SuperMouse works by sensing your finger pressure on a small pad, causing your cursor to move on the screen. Press hard to zip across the



- Works with PC compatible systems
- ✓ Uses serial port COM1 COM2 or mouse port
- Includes driver software, mouse port adaptor and manual

PORTA-POINT 2 lbs ...... \$69.95

#### **FotoMan** Plus Camera

The new FotoMan Plus offers 67% higher resolution, up to 115K baud image transfer and over 100 hr. battery life. Shoots from 16" to 6 ft. with flash.

# FOTOMAN 5 lbs......\$599.00

#### Microsoft Mouse

This 2-button mouse has an acceleration mode for quick moves across the screen. Simply plug the mouse into an existing serial port and install the software.

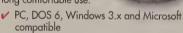


- ✓ For PC compatible systems
- ✓ Uses serial ports COM1-COM4 and IRQ2-
- Includes female DB09 connector, driver software and manual

MS-M	OUSE 2 lbs	\$54.95
MSM	OUSE-WIN 6 lbs les Windows 3.11	\$149.95

#### Space-Saving **TrackMan**



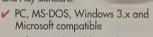


- ✓ Uses serial port COM1 COM4
- ✓ 50-19,000 DPI, software-selectable

TRACKMAN-P 3 lbs \$99.
Portable version snaps onto the side of notebook computers

#### MouseMan Mouse

The new version of Logitech's 3-button MouseMan is designed to better fit your hand. Complete with sophisticated mouse driver and utilities, the MouseMan already adheres to the Plug and Play standard.



- ✓ Software adjustable resolution and acceleration
- ✓ Uses serial port COM1-COM4
- ✓ Designed for comfortable right-handed use
- ✓ Adheres to Plug and Play standard

MOUSEMAN2-\$ 3 lbs......\$59.95 DEXXA-MOUSE 2 lbs .....



#### Memory

#### Leap to 100MHz 486DX4 Performance!



For the fastest performance from your existing 33MHz 486 motherboard, simply plug Intel's latest and fastest processor in the family into your existing motherboard.

## Boost Performance to a 75MHz 486DX4!



For the fastest performance from your existing 25MHz 486 motherboard, simply plug this processor into your existing motherboard.

BOXDX4ODPR75 1 lb \$439.95 Replaces 25MHz 486SX or 486DX CPU with 75MHz OverDrive

BOXDX4ODP75 1 lb \$439.95 Plugs into 25MHz 486SX or 486DX OverDrive socket

#### Upgrade to a 66MHz 486DX2!

For Intel's most economical performance upgrade, simply replace your existing 33MHz 486 CPU in your motherboard with this OverDrive processor.





## *Upgrade to a 50MHz 486DX2!*

Plug this processor into your 25MHz 486 motherboard for 50MHz 486DX2 processing power! Works

with 486SX and 486DX processors.

BOXSX2ODP-50 1 lb......\$119.95 Plugs into 25MHz OverDrive socket, converts to 50MHz 486SX2

#### 16Mb Memory Expansion Board

Add up to 16Mb of memory to 8 or 16-bit systems with Acculogic's expansion board! This short card includes support for extended memory and LIM 4.0 EMS in hardware. Memory-intensive applications, such as Windows 3.1, take advantage of the highspeed, 0 wait-state bus interface. Includes unique self-installing software—no switches to set or memory to calculate!

- 8/16-bit 8088 or 286/386/486 PC compatible card with support for extended, LIM 4.0 and LIM 3.2 EMS in hardware
- ✓ 16Mb RAM using up to 4 SIMMs, (ØKb installed)
- ✓ Uses 1M x 9 and 4M x 9 80ns SIMMs in multiples of 2



#### & Acculogic

- ✓ No jumpers to set; easy software address setup and configuration
- ✓ Includes self-installation program, LIM 4.0 expanded memory driver, software

RAMPAT+ 2 lbs ...... \$139.95

24-Hour Toll-Free Ordering

800-538-5000

#### Cyrix Math Co-Processors

These state-of-the-art Cyrix math co-processors are designed to perform for years to come! The Cyrix Series includes a manual and software guide, as well as a full 5-year unconditional manufacturer's warranty to assure you of non-stop calculating power!



Part #	Speed	cro	Frice
83587-25	16-25MHz	80386SX	49.95
83587-33	16-33MHz	80386SX	59.95
83D87-33	16-33MHz	80386DX	59.95
83D87-40	16-40MHz	80386DX	69.95

#### Intel Math Co-Processors

Intel math co-processors can speed up over 2,100 applications! Spreadsheets, CAD, charting and

graphing applications, databases and statistics modeling can be accelerated by up to 500%! Backed by Intel's lifetime warranty.

intel

Part #	Speed	CPU	Price
8087	5MHz	8088	89.95
8087-2	8MHz	8088	129.95
8087-1	10MHz	8088	169.95
80287-XL	6-20MHz	80286	74.95
80387-SXP	16-25MHz	80386SX	74.95
80387-SX33	16-33MHz	80386SX	84.95
80387-SL	16-25MHz	80386SL	74.95
80387-DXP	16-33MHz	80386DX	79.95
80487-SX	16-25MHz	80486SX	369.95
RAPIDCAD-386D	16-33MHz	80386DX	249.95

#### Full-Function

#### Dynamic Memory Tester

This portable unit provides testing capabilities previously available in desktop units costing thousands more. The tester runs a thorough test of the memory module, testing each cell with a variety of patterns. The tester displays module size, type and access time. In bit-by-bit mode, the unit provides individual bit speed ratings. A chip-heat mode warms the memory module for temperature-related speed measurements. The 2-line alphanumeric LCD displays test status in real-time, allowing the user to terminate tests on the fly.

- ✓ Tests 30-pin SIMMs and SIPs to 16M plus DIPs to 4M bits
- ✓ Select access times from 30ns to 90ns in 5ns increments, plus 100, 120, 150 and 200ns
- ✓ 4.5, 5.0 and 5.5 selectable test voltages include bounce and cycle algorithms
- ✓ Normal, quick and loop testing algorithms
- Results show open/short pin, data, empty, major and access errors
- ✓ Current limit and reverse insertion protection to prevent damage while testing

- Chip heat mode warms device at 5.5V before testing
- ✓ SIMMs and SIPs can be bit-by-bit tested for more thorough results

FIRE

 Parallel printer port can output setup, statistics, results and error information

 CHROMA-3201A 5 lbs
 \$949.00

 CHROMA-320105 2 lbs
 \$249.95

 Adaptor for 72-pin SIMMs to 16M

## Convert SIPs to SIMMs!

Most motherboards and cache cards require SIMM devices today. Make use of your SIP investment with these converters. By simply plugging the SIP into the converter, your old unusable SIPs can be plugged into a SIMM socket. All you need to do is make sure the SIPs are fast enough for your application!



A Range San Thomas and a non a fine back to be a first to
SIP2SIMM 1 lb
1MEG9CSOCK 1 lb
1MEG9CDIP 1 lb
1MEG3CDIP 1 lb
<b>256K9CDIP</b> 1 lb
256K3CDIP 1 lb
*Note: DIPs must be soldered into adaptor card

## Static RAM



Part #	Org	Speed	#Pins	Price
7C185-15	8K x 8	15ns	28/.3"	3.49
6288-20	16K x 4	20ns	22	3.95
HM62832-25	32K x 8	25ns	28/.3"	4.49
HM62832-20	32K x 8	20ns	28/.3"	4.95
HM62832-15	32K x 8	15ns	28/.3"	5.49
7C1024-20	128K x 8	20ns	32/.4"	26.95
7C1024-20TPC	128K x 8	20ns	32/.3"	26.95
7C1024-15	128K x 8	15ns	32/.4"	31.95

#### PCMCIA Memory Cards

PCMCIA memory cards are solid state modules, about the size of a credit card, used to store and retrieve information. They can be used just like a floppy drive, so you can save and restore information without any special software. Since there are no motors, PCMCIA cards use less power and operate faster than floppy drives. The higher-capacity flash devices provide storage capacities comparable to yesterday's hard drives, and they also include Stacker 3.0 compression software.

- PCMCIA standard provides compatibility with a wide range of notebook, palmtop and desktop systems
- No moving parts to wear out or adjust; wellprotected data can't be erased by touch or magnets
- ✓ Static RAM modules include battery

#### SIP Modules



Part #	Org	Speed	Chips	Price
256KX9SIP-80	256K x 9	80ns	3	14.95
1MBX9SIP-80	1M×9	80ns	3	46.95
1MBX9SIP80X9	1Mx9	80ns	9	49.95
1MBX9SIP-60	1M x 9	60ns	3	49.95

#### Dynamic RAM



Part #	Org	Speed	#Pins	Price
4164-100	64K x 1	100ns	16	1.79
TMS4464-10	64K x 4	100ns	18	2.69
41256-120	256K x 1	120ns	16	1.79
41256-80	256K x 1	80ns	16	2.29
52C4256-80	256K x 4	80ns video	28 ZIP	11.95
52C4256-60	256K x 4	60ns video	28 ZIP	12.95
414256-80	256K x 4	80ns	20	5.95
1MB-100	1M x 1	100ns	18	5.95
1MB-80	1M x 1	80ns	18	6.25

#### 72-Pin SIMMs



Part #	0rg	Speed	#Pins	Price
1MX32-70	1M x 32	70ns	8	164.95
1MX36-70	1M x 36	70ns	12	184.95
1MX36-60	1M x 36	60ns	12	189.95
2MX36-70	2M x 36	70ns	24	379.95
2MX36-60	2M x 36	60ns	24	399.95
4MX36-70	4M x 36	70ns	36	699.00
4MX36-60	4M x 36	60ns	36	725.00

## EPSON\*

- Flash modules do not require battery to retain
- ✓ Flash modules include Stacker 3.0 compression software for up to double the stated capacity
- Each includes manufacturer's 2-year limited warranty

PCM-S512K	512Kb static RAM card, Type I . \$139.95
PCM-S1M	1Mb static RAM card, Type 1 \$169.95
PCM-S2M	2Mb static RAM card, Type 1 \$329.95
PCM-F2.5M	2.5Mb flash RAM card, Type II . \$329.95
PCM-F5M	5Mb flash RAM card, Type II \$399.95
PCM-F10M	10Mb flash RAM card, Type II \$599.00
PCM-F20M	20Mb flash RAM card, Type II \$999.00

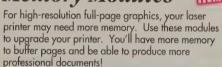
#### SIMM Modules



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Part #	Org	Speed	Chips	Price
256KX9-80X3	256K x 9	80ns	3	15.95
256KX9-60X3	256K x 9	60ns	3	16.95
1MX8-70X2	1M x 8	70ns	2	41.95
1MX9-100X9	1M×9	100ns	9	41.95
1MX9-80X3	1M x 9	80ns	3	44.95
1MX9-80X9	1M x 9	80ns	9	45.95
1MX9-70X3	1M x 9	70ns	3	45.95
1MX9-70X9	1M x 9	70ns	9	46.95
1MX9-60X3	1M x 9	60ns	3	46.95
1MX9-60X9	1M x 9	60ns	9	48.95
4MX9-80X9	4M x 9	80ns	9	169.95
4MX9-70X9	4M x 9	70ns	9	179.95
4MX9-60X9	4M x 9	60ns	9	184.95
16MX9-70X9	16M x 9	70ns	9	699.00
16MX9-60X9	16M x 9	60ns	9	725.00

#### **HP Printer**

#### **Memory Modules**



HP Printers	Size	HP#	Part #	Price
LaserJet II, IID	2Mb	H33444B	H200D	169.95
	4Mb	H33445B	H400D	299.95
LaserJet IIP,	1Mb	H33474B	H1003	79.95
IIP+, III, IIID, IIIP	2Mb	H33475B	H2003	139.95
	4Mb	H33477B	H4003	199.95
LaserJet 4P,	2Mb	C3131A	H3131	139.95
4MP, 4 Plus	4Mb	C3132A	H3132	229.95
	8Mb	C3133A	H3133	429.95
LaserJet 4,4Si,4SiMx,	4Mb	C2065A	H4/4	219.95
Deskjet 1200C	8Mb	C2066A	H4/8	429.95

#### Tech Tip

Windows applications use more memory than ever! With many programs requiring 30Mb or more of disk storage, it's a wonder they run in 4Mb of RAM. Windows accomplishes this by saving code to distrebacking it when necessary. Performance can frequently be improved by adding more RAM, which reduces the number of disk accesses.

#### **Low-Cost SIMMs**

These devices are becoming widely used as a result of improved reliability in today's memory subsystems. Instead of using a memory chip to save and generate the parity bit, these devices compute a parity value based on the currently-accessed byte. Your system gets the dummy parity bit without using costly memory!



Part#	Org	Speed	#Chips	Price
1MX9-80X2	1M x 9	80ns	3	41.95
1MX9-60X2	1M x 9	60ns	3	43.95
4MX9-80X2	4M x 9	80ns	3	159.95
4MX9-60X2	4M x 9	60ns	3	174.95
16MX9-70X8	16M x 9	70ns	9	679.00

## Displays

Reduce Your Power Bills



When your computer is not being used, the POWER MISER automatically turns the monitor off to save power. When the unit senses keyboard activity, it automatically restores power to the monitor. Builtin surge suppression protects all of your equipment from potentially devastating electrical disturbances.

- ✓ PC compatible external unit
- Connects in series with keyboard to detect activity
- ✓ User selectable timer from 5 to 60 minutes
- ✓ 14A maximum total load, 5A max for monitor
- ✓ Circuit breaker and U/L listed for safety
- ✓ Includes DIN5S to mini DIN6P keyboard converter

#### Paper White Monitor

This 14" paperwhite monitor converts your color images into up to 64 shades of gray. It is ideal for low-cost desktop publishing systems.

- ✓ Resolution up to 640 x 480
- ✓ Non-glare 14" diagonal display
- ✓ Refresh rate of 70Hz maximum in 640 x 480 NI mode
- √ 110/220VAC, 50/60Hz input

MONO-VGA 24 lbs ......\$149.95

#### PC to TV\* Converter

Bring the dynamic dimension of multimedia video to your presentations. This compact unit converts your VGA output so that you can connect to a big screen TV or other NTSC monitor. This external converter is especially useful for notebook and laptop users, since it simply plugs into the VGA output of your computer.

- ✓ Supports Windows 3.0 and higher; compatible with all VGA cards
- ✓ Supports all IBM standard modes up to 640 x 480 Hi-Color (NTSC)
- ✓ Simultaneous display on both VGA and TV monitors
- ✓ TV auto blanking and brightness control; Built-in flicker filter
- ✓ Includes Acteon 2.5SE presentation software and 6' S-Video cable
- ✓ Input: VGA DB-15 pin connector; Output: Composite video, S-Video RGB (15KHz) and VGA RGB (31KHz)

\*Note: Outputs S-video and composite video for use with TV or video recorder

### Expand Your Presentations to Four **Monitors**

Now you can display your VGA graphics and multimedia presentations on as many as four different monitors simultaneously. Use this unit at conferences and seminars to provide all attendees optimum viewing. It's also an excellent way to accurately display the same video on numerous monitors because the input is from a single source. Comes complete with AC adaptor.

- ✓ Analog VGA input signal
- Buffers input load and drives up to 4 analog VGA monitors up to 200 feet away
- ✓ One high-density 15-pin male D-SUB input connector and four high-density 15-pin female output connectors
- ✓ Up to 1024 x 768 resolution in an infinite range of colors

VGA-MULTI-4 3 lbs ......\$199.95 VGA-MULTI-8 4 lbs .......\$299.95 8 port version of above

### MicroScan 4G ADI 15" Monitor

This high-quality 15" monitor features microprocessor-based digital controls for optimum screen quality. The microprocessor automatically detects the video mode and resizes the display accordingly. 15" CRTs offer 13% more surface area than 14" models. For sharp, easy to read graphics, this monitor features a 0.28mm dot pitch. Non-interlaced modes, even at 1280 x 1024 resolution, reduce flicker and potential eye fatigue.



- ✓ Resolution up to 1280 x 1024
- 0.28mm dot pitch for sharp displays
- ✓ Compatible with all standard non-interlaced and interlaced VGA adaptors
- ✓ Refresh rate of 60Hz in 1280 x 1024 NI, 72Hz maximum in 1024 x 768 NI mode
- ✓ Non-glare 15" diagonal CRT
- 110/220VAC, 50/60Hz input
- Front panel digital controls
- ✓ 14.6"L x 14.6"W x 15.2"H

VGA-MON-15N 35 lbs......\$499.95



#### Anti-Glare Filter

This anti-glare filter will enhance the contrast of your monitor, reduce eye strain and headaches, and enable you to work longer without fatigue. Once you use it, you'll wonder why you waited so long to get one!

GLARE-14 1 lb ......\$14.95

#### Upgrade to 1024 x 768 Color

Our VGA package offers both an interlaced monitor and a 16-bit 1024 x 768 Windows accelerator VGA card in one low-cost package! The 14" monitor features a 0.39mm dot pitch and 256-color capability to produce a vivid display that is ideal for CAD/CAM applications, desktop publishing and color reproduction.



- ✓ 16 bit PC compatible ISA card
- ✓ Resolution:

1024 x 768 in 16/256 colors, 640 x 480 in 16/256 colors, 320 x 200 in 16/256 colors

## Non-Interlaced 17" Monitor

This monitor's large, 17" screen size makes small text readable! Designed with the latest digital video display technology, this monitor combines non-interlaced video with 0.26mm dot pitch for reduced flicker and crisp, vivid colors!



- Resolution up to 1280 x 1024; 0.26mm dot pitch for sharp, crisp displays
- Compatible with all standard non-interlaced and interlaced VGA adaptors
- ✓ Refresh rate of 60Hz in 1280 x 1024 NI, 72Hz maximum in 1024 x 768 NI mode
- ✓ Non-glare 17" diagonal screen
- √ 110/220VAC, 50/60 Hz input
- Brightness, contrast, vertical center and size, horizontal phase and size, degauss, power, sync and VGA mode controls
- ✓ 17.5"L x 15.7"W x 17"H

- ✓ Includes MCT-VGA-5000 Windows accelerator card with 1Mb RAM installed
- ✓ 0.39mm dot pitch
- Refresh rate of 87Hz in 1024 x 768 INT, 70Hz maximum in 640 x 400 NI mode
- ✓ Non-glare 14" diagonal screen
- ✓ 1:1 aspect ratio in 1024 x 768 and 640 x 480 modes
- ✓ 110/220VAC, 50/60Hz input
- Software drivers for Windows 3.1 and other popular applications included
- ✓ 14.5"L × 15.5"W × 14"H

 VGA-PKG-1024
 33 lbs
 \$339.95

 VGA-MONITOR
 32 lbs
 \$269.95

 14" 1024 x 768 VGA monitor without card

### How Important is Your Monitor Choice?

There's a lot more to monitors than resolution and screen size. We decided to put over 40 single PC, allowing us to directly compare images. After running continuously for over one month, many of the monitors had failed completely. As a result of the tests, we term, we think you'll agree!

#### NEC MultiSync Mondtors



NEC extends its awardwinning technology to a new dimension in color accuracy. The MultiSync series offers the advanced screen performance you want! Highcontrast flat square screen

surfaces minimize blurring and distortion, providing the clean, crisp edge-to-edge images you need to work productively under Windows. AccuColor color matching provides color accuracy so screen colors match your hard copy. Microprocessor-based memory and digital controls provide automatic sizing and centering of images for preset and custom graphics modes.

- ✓ Resolution up to 1280 x 1024 in interlaced and non-interlaced modes; 0.28mm dot pitch
- Advanced Invar shadow mask makes screen 20% brighter without loss of focus
- Analog VGA input, antistatic screen eliminates dust attraction and static shock

 NEC-2V 28 lbs
 \$369.95

 14" display, 60Hz maximum refresh rate in 1024 x 768 NI

 NEC-3V 34 lbs
 \$499.95

 15" display, 60Hz maximum refresh rate in 1024 x 768 NI

 NEC-3FGE 42 lbs
 \$579.00

 15" display, refresh rate of 60Hz in 1024 x 768 NI, 76Hz maximum in 800 x 600 NI, excludes AccuColor

## VGA Package with Windows Accelerator!

Our latest video package combines a high-quality SuperVGA display with a fast Windows accelerator, making quality performance affordable! CAD, desktop publishing and other high-resolution applications will become more productive. The package consists of a sharp 1024 x 768 non-interlaced monitor with 0.28mm dot pitch and a video card with drivers for just \$459.95! The monitor operates in non-interlaced mode for reduced flicker. Its low 0.28mm dot pitch reduces the "grainy" look that you'll find in inferior monitors. To produce your complex displays fast, we've also included our MCT-VGA-5000 Windows accelerator card. It uses the latest in state-of-the-art technology from Cirrus Logic to bring you a great combination of performance and value.

- 16-bit PC compatible ISA card supports interlaced and non-interlaced modes
- Resolution:

  1024 x 768 in 16/256 colors,

  800 x 600 in 16/256/64K colors,

  640 x 480 in 16/256/64K/16M colors
- ✓ Sharp, crisp 0.28mm dot pitch
- ✓ Refresh rate 60Hz in 1024 x 768 NI, 70Hz maximum in 640 x 400 NI mode



- ✓ Non-glare 14" diagonal screen
- Includes MCT-VGA-5000 Windows accelerator card with Cirrus Logic chip set and 1Mb of memory installed
- ✓ VGA, EGA, CGA, MDA and HGC mode compatible
- 110/220VAC, 50/60 Hz input

energy

✓ Includes software drivers for Windows 3.1 and other popular applications

 VGA-PKG-14N
 33 lbs
 \$459.95

 VGA-MON-14N
 32 lbs
 \$379.95

 Monitor without video card
 \$379.95

## Display Cards



#### RocGen VGA Video Production Card

This high-quality genlock card replaces your existing VGA card, allowing you to combine and synchronize VGA graphics with an incoming video signal. It is a cost-effective means for generating multimedia presentations, suitable for recording directly to video tape or presenting live on TV monitors. Special effects provide fade-in, fade-out, dissolve, color-keying and other dynamic effects for attention-grabbing presentations.

- ✓ 16-bit PC compatible ISA card
- ✓ Generates special effects for fade-in, fade-out, dissolve, color-keying, tinting and more
- ✓ Resolution:

1280 x 1024 in 16 colors\* 1024 x 768 in 16/256 colors\* 800 x 600 in 16/256/64K colors\* 640 x 480 in 16/256/64K colors\*

- ✓ Refresh rate of 72Hz maximum in 1024 x 768 NI mode
- ✓ 256Kb DRAM installed, expandable to 1Mb using 6 pcs 414256-70
- ✓ Uses Tseng Lab's ET-4000 VGA and ICS GPS500 genlock chip sets
- ✓ Female RCA connectors for NTSC composite input and output, plus HDB15S for VGA output
- ✓ Includes software drivers for AutoCAD, Lotus 1-2-3, Windows 3.x, WordPerfect and other popular applications

ROCGEN-VGA 3 lbs ...... \$349.95

\*Note: Requires 1Mb for operation above 640x480 in 16 colors.

#### Mono & Color Graphics

Modular Circuit Technology's monochrome/color graphics adaptor is ideal for replacement or low-cost installations. The card is



Hercules compatible and supports both monochrome and RGB color monitors. It has a 9-pin TTL output and 25-pin parallel printer output.

- ✓ 8-bit PC compatible ISA card
- ✓ Hercules compatible mono graphics in 720 x 348 resolution, or 80-column text mode
- ✓ Color graphics mode is 320 x 200 in 4 colors
- ✔ Parallel port is addressable as LPT1

MCT-CGP 1 lb ...... \$49.95

# Derick's High Tech Corner IF NOT FOR YOURSELF, THINK OF YOUR FRIENDS

Pretend this is a description of your "friend's" home movies. After 2 minutes of snow, most of a face appears filling the screen. Then suddenly, the scene changes, and for about 3 minutes we get to enjoy Johnny's birthday party.

After a suitable pause for more snow and a focus adjustment, the scene switches to a view of the mountains, but we don't know which! If this description hits a little close to home, remember that your neighbor may have a similar point of view.

Imagine that instead of snow, focus problems, and a close-up of nose hairs, we substituted a video title, information about Johnny's age, birthdate, names of friends in the

pictures, and for good measure threw in information about the mountains.

I now know just how easy it can be if you have the right equipment and software. If you are involved in video presentations, for home, work, or training, the ROCGEN-PRO deserves your attention.

#### Low-Cost VGA Card



#### **MODULAR CIRCUIT TECHNOLOGY**

Upgrade your system's video interface without spending a fortune! This 3/4-length card uses state-of-the-art ASIC technology to offer the same features as more expensive cards without reducing the compatibility or reliability. It can be used in VGA, EGA, CGA, MDA and Hercules Graphics modes, so existing low-resolution applications will work just as well as standard 640 x 480 applications.

- ✓ 8/16-bit PC compatible ISA card
- ✓ Uses Cirrus Logic GD5401 chip set
- ✓ Resolution:

800 x 600 in 16 colors 640 x 480 in 16 colors 320 x 200 in 16/256 colors

- ✓ 256Kb video RAM installed
- ✓ Supports analog or multisynch monitors
- ✓ Includes drivers for Windows 3.1, AutoCAD, Lotus 1-2-3, GEM, Ventura Publisher and more

MCT-VGA-1000 2 lbs ......\$49.95

#### Diamond Viper VLB

#### DIAMOND



This super-fast Windows accelerator is specifically designed to take advantage of the 32-bit VESA Local Bus and provide you with the ultimate in graphics performance. The card provides up to a 76Hz refresh rate in 1024 x 768 mode for minimal flicker.

- 32-bit PC compatible VESA Local Bus card supports interlaced and non-interlaced, analog or multisynch monitors
- ✓ Resolution:

1280 x 1024 in 256 colors 1024 x 768 in 256/64K colors 800 x 600 in 256/64K/16M colors 640 x 480 in 256/64K/16M colors

✓ Refresh rate of 75Hz maximum in 1280 x 1024 NI mode



- 2Mb of VRAM installed
- ✓ Uses Weitek Power 9100 chip set
- Software drivers for Windows 3.1, Windows for Workgroups 3.11, AutoCAD 386, 3D Studio and more
- ✓ Includes manufacturer's 5-year warranty

PCI Bus from Modular Circuit Technology!

#### 1280 x 1024 Super VGA Card



When upgrading your system to the fast PCI Local Bus, be sure to use a PCI video card! Modular Circuit Technology's fast PCI card features a Cirrus c Windows Accelerator

Logic Windows Accelerator chip to further boost your graphics performance. Your system will quickly update the screen, and the palette of up to 16,000,000 colors will produce more shades, hues and tones than your eyes can distinguish!

- ✓ 32-bit PC compatible PCI card
- ✓ Supports interlaced and non-interlaced analog or multisynch monitors
- ✓ Resolution:

1280 x 1024 in 16 colors, 1024 x 768 in 16/256 colors, 640 x 480 in up to 16M colors



- ✓ Refresh rates up to 75Hz in 1024 x 768 NI mode; VESA compatible video modes
- ✓ 1Mb DRAM installed
- ✓ Uses Cirrus Logic GD5430 chip set
- ✓ 15-pin high-density D-SUB for analog output and 26-pin VESA-compatible expansion port
- ✓ Includes software drivers for AutoCAD, Lotus 1-2-3, Word, WordPerfect and more

MCT-VGA-PCI 2 lbs ...... \$159.95

## Low-Cost, High Performance VESA VGA Accelerator



MCT's VESA Local Bus video card uses an S3 Windows accelerator in combination with the local bus interface to produce outstanding video response. This card is ideal for graphics-intensive applications, where graphics updates are frequent.

- 32-bit PC compatible VESA Local Bus card supports interlaced and non-interlaced, analog or multisynch monitors
- 1Mb DRAM expandable to 2Mb using 8 pieces 414256-60
- ✓ Uses S3 86C805 chip set
- ✓ Resolution:

1280 x 1024 in 16/256 colors 1024 x 768 in 16/256 colors 800 x 600 in 16/256/64K colors 640 x 480 in up to 16M colors

- 15-pin high-density D-SUB for analog output and 26-pin VESA compatible expansion port
- ✓ Includes software for Windows 3.1, AutoDesk, WordPerfect and more

MCT-VGA-VL3 2 lbs ...... \$139.95

### Features S3 Accelerator and 2Mb RAM High-Speed VGA Card



#### **MODULAR CIRCUIT TECHNOLOGY**

Accelerate your PCI local bus system to it's fullest potential with this FAST video card. With a WinMark of 59.4M and 2Mb of memory installed, you'll become more productive and be ready for higher resolution images.

- ✓ 32-bit PC compatible PCI card
- ✓ Supports interlaced and non-interlaced analog or multisynch monitors
- ✓ Resolution:

1600 x 1200 in 256 colors, 1280 x 1024 in 256 colors, 1024 x 768 in up to 64K colors, 640 x 480 in up to 16M colors

- Refresh rates up to 75Hz in 1280 x 1024 NI mode
- ✓ Uses S3 Vision 864 chip set

MCT-PVGA-2 2 lbs ...... \$249.95

#### VESA Local Bus VGA Card

STB's video card combines the high-tech VESA Local Bus with an S3 Windows accelerator for superior video performance. With a 30,100,000 WinMark 3.11 overall rating, it provides an outstanding combination of value and speed. It's ideal for Windows and graphics-intensive applications.

- 32-bit PC compatible VESA Local Bus card supports interlaced and non-interlaced, analog or multisynch monitors
- ✓ 1Mb DRAM installed
- 15-pin high-density D-SUB for analog output and 26-pin VESA compatible expansion port
- ✓ Uses S3 P86C805 chip set





30.1M

Display Cards

Resolution:

1280 × 1024 in 16 colors

1024 × 768 in 16/256 colors

800 × 600 in 16/256/64K colors

640 x 480 in up to 16M colors

✓ Includes software for Windows 3.1, Generic CADD and more

#### Diamond 64-Bit Windows Accelerators

Diamond's 64-bit performance-driven SpeedStar 64 graphics accelerator is ideal for ISA bus Windows 3.1 and AutoCAD users. This card combines fast 64-Bit graphics processor technology with reduced-flicker high-speed refresh rates. Up to 16,700,000 brilliant colors can be displayed in Windows for professional, photo-realistic imaging. A variety of drivers are included for CAD and other graphics operations.

- ✓ 16-bit PC compatible ISA card
- Supports interlaced and non-interlaced analog or multisynch monitors
- Refresh rate up to 75Hz maximum in 1024 x 768 NI mode
- DPMS power consumption conforms to Energy Star and VESA guidelines
- ✓ Resolution:

1280 x 1024 in 16/256K colors, 1024 x 768 in 16/256/256K colors, 800 x 600 in 16/256/64K/16M colors, 640 x 480 in 16/256/64K/16M colors

- ✓ 2Mb of DRAM installed
- ✓ Cirrus Logic GD5434 chip set



- 15-pin high-density D-SUB for analog output and 26-pin VESA-compatible expansion port
- Software drivers for Windows 3.1, AutoCAD, WordPerfect, Windows NT and more
- ✓ Complete with manufacturer's 5-year warranty

 SPEEDSTAR-641
 3 lbs
 \$179.95

 STEALTH-64P
 3 lbs
 \$329.95

 PCI Local Bus card with S3 Vision 964 chip set and 2Mb VRAM
 \$199.95

 STEALTH-64V
 3 lbs
 \$199.95

 VESA LB with S3 Vision 864 chip set and 2Mb DRAM
 \$199.95

 PCI card with S3 Vision 864 and 2Mb DRAM
 \$199.95

#### 1280 x 1024 Windows Accelerator

Modular Circuit Technology's accelerator card takes advantage of Cirrus Logic's latest chipset to speed your Windows and other graphics-intensive applications! This low-cost card upgrades your resolution to 1280 x 1024 video and has a sophisticated controller for fast video updates without the added VRAM cost. Up to 16,000,000 colors for true color representation.

- ✓ 16-bit PC compatible ISA card
- ✓ Resolution:

1280 x 1024 in 16 colors 1024 x 768 in 16/256 colors 800 x 600 in 16/256/64K colors 640 x 480 in 16/256/64K/16M colors

- Refresh rate of 70Hz maximum in 1024 x 768
- ✓ 1Mb DRAM installed
- ✓ Uses Cirrus Logic GD5424 chip set

Toll-Free FAX Ordering **800-538-5005** 

\$**99**95





# MODULAR CIRCUIT TECHNOLOGY

- ✓ Supports analog or multisynch monitors
- ✓ 15-pin high-density D-SUB for analog output and 26-pin VESA compatible expansion port
- Automatic mode switching for VGA, EGA, CGA, MDA, HGC & 132-column text
- Includes software drivers for Windows 3.1, AutoCAD, AutoShade, Generic CADD, Lotus 1-2-3, Word, WordPerfect and more

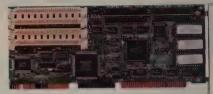
MCT-VGA-5000 2 lbs ...... \$99.95

## I/O Cards

#### VESA Local Bus Cache IDE Controller

Improve the throughput of your VESA Local Bus motherboard by installing MCT's caching VLB controller. This card takes advantage of the VESA Local Bus and transfers data through the 32bit bus at up to 33MHz. The card also supports up to four IDE hard drives in the DOS environment, so you won't have to throw away hard drives when you upgrade!

- ✓ 32-bit PC compatible VESA Local Bus card
- Supports up to four IDE hard drives and up to two 360Kb, 720Kb, 1.2Mb, 1.44Mb or 2.88Mb floppy drives
- ✓ Up to 16Mb using up to four 256K, 1M and 4M x 9 60ns SIMMs, in multiples of 2 (ØKb installed)
- ✓ Two 40-pin, one 34-pin and two 4-pin male
- ✓ Includes one floppy and two hard drive cables, manual and setup software



MCT-VCEH	2 lbs	\$199.95
MCT-VCIO	2 lbs	\$179.95
MICI-VCIO	Z ID3	911 1110
Above with	2 serial and 1 parallel port;	includes
512Kh RAN	A expandable to 1Mb using	four
31210 10 0	Comparidable to Time out of	4.44.41
A3 A256-60	Yes cumparts 2 IDF & up to 1	44Mh

#### Cache IDE Controller

Improve your existing IDE hard drive's throughput with our cached controller. The card first looks for your most frequently used data in on-card RAM. Since your system isn't waiting for the drive to spin into position as frequently, hardware delays are reduced. A unique technique allows up to four hard drives to be used, even under DOS!

- ✓ 16-bit PC compatible ISA card
- ✓ Controls up to four IDE hard drives
- ✓ Supports up to two 360Kb, 720Kb, 1.2Mb or 1.44Mb floppy drives

Expandable cache from 512Kb to 16Mb, uses 256K x 9, 1M x 9 or 4M x 9 80ns SIMMs, in multiples of 2 (ØKb installed)	✓ Configure as p floppy controll ✓ On-board BIO
Achieves up to 16M byte/second data	management

transfer rate MCT-CIDEFH 2 lbs .... MCT-EFH 2 lbs ...... EISA cache IDE controller



**MODULAR CIRCUIT TECHNOLOGY** 

- primary or secondary hard and
- S with diagnostics and defect
- ✓ Includes cables for 2 floppy and 2 hard drives

#### IDE Floppy/Hard Controller

#### Our Low-Cost IDE Interface Card!

Our low-cost, standard IDE interface card controls up to two floppy and two hard drives. This 16-bit card rivals the transfer rates of ESDI and SCSI interfaces by transferring a full 16-bits of data from the drive to the controller.

- 16-bit PC compatible ISA card
- ✓ Supports up to two IDE hard drives
- ✓ Supports up to two 360Kb, 720Kb, 1.2Mb or 1.44Mb floppy drives
- Supports hard drive activity LED



#### **MODULAR CIRCUIT TECHNOLOGY**

✓ Includes cables for one hard and two floppy drives plus manual

MCT-IDEFH 2 lbs..... \$29.95

#### **Customer Testimonial**

"... I want to take the time to thank you and JDR for your prompt attention. It is refreshing to see this type of attitude again... I can assure you that all of my future computer hardware needs will be filled by JDR Microdevices...

- E. Hammer, Elgin, IL

#### Other Controller Cards

#### 8-Bit MFM HD Controller

Adds up to two MFM drives to your 8088 PC compatible. MCT-HDC 2 lbs ......\$79.95

#### 16-Bit MFM Controller

Supports up to two floppies and two MFM hard disk drives. 1:1 interleave interface. EV349 2 lbs .....

#### Low-Cost Floppy Controller

8-bit card supports up to two internal 360Kb or 720Kb floppy disk drives. ACT-FDC 1 lb ......\$29.95

**Toll-Free Technical Support** 

#### Enhanced IDE Controller

MCT's latest IDE hard drive controller allows your system to have more than two physical hard drives when used with DOS 5 or later. This versatile



**# MODULAR CIRCUIT TECHNOLOGY** 

secondary controller supports four unique BIOS addresses, making coexistence with other drive types possible. The on-board BIOS integrates attached drives independently of the motherboard BIOS, so you can add more drives than your CMOS setup accepts!

- ✓ 16-bit PC compatible ISA card
- ✓ Controls up to 2 IDE hard drives
- ✓ On-board BIOS automatically detects drive parameters and configures for Native Mode efficiency
- ✓ For use as a primary or secondary controller
- ✓ Allows DOS-based systems to control 2 or more hard drives
- ✓ Includes cable for 2 IDE hard drives

## VESA Local Bus IDE Controller with I/O

Add a VESA Local Bus IDE hard drive controller to your compatible motherboard and save slots too! This interface includes two serial ports, a parallel port and floppy controller to reduce the slots used in your system. The VESA Local Bus will increase the transfer rates of data to your hard drive and reduce CPU overhead!

- ✓ 32-bit PC compatible VESA Local Bus card
- ✓ Supports up to two 360Kb, 720Kb, 1.2Mb or 1.44Mb floppy drives
- ✓ Two 16450-compatible serial ports addressable as COM1-COM4
- One parallel port, addressable as LPT1 or 2
- Supports up to four IDE hard drives



# MODULAR CIRCUIT TECHNOLOGY

- ✓ Two 40-pin, one 34-pin and one 4-pin male header, plus one female DB25, one male DB25 and one male DB09
- ✓ Includes manual, one floppy and two hard

MCT-VIO	2 lbs	. \$99.95
MCT-VIO+	2 lbs	\$119.95
Two IDE w	2 lbs ith 16550 compatible serial I/O,	ECP/EPP

## High-Speed Multi-I/O and IDE Controller



**MODULAR CIRCUIT TECHNOLOGY** 

This card combines two 448Kbps high-speed serial ports with all the standard I/O features on one card! The high-speed serial ports support DMA transfers to attain this high throughput. The card also combines one parallel and one game port with a 2-drive IDE controller and a 2-drive floppy controller, making it ideal for systems without many available slots.

- ✓ 16-bit PC compatible ISA card
- ✓ Supports up to two IDE hard drives
- ✓ Supports up to two 360Kb, 720Kb, 1.2Mb or 1.44Mb floppy drives
- ✓ Two high-speed NS16550 compatible serial ports with 16-byte FIFO, DMA capability and 448Kbps maximum rate
- ✓ One game port
- ✓ One parallel port, addressable as LPT1 or 2
- Any or all functions can be disabled via jumper blocks
- ✓ Includes cables, bracket and manual

### 8-Bit IDE Controller

I/O Cards

Although IDE hard drives were designed for 16-bit systems, this controller lets you take advantage of IDE in your 8-bit 8088 PC compatible computer system. Upgrade to a faster, more reliable and less expensive IDE hard drive with our 8-bit IDE controller. This card features multiple BIOS and port I/O addresses. It can coexist with another hard drive controller. The on-

board BIOS eliminates the need for driver software.

- ✓ ISA card
- ✓ Controls up to 2
  IDE hard drives
- ✓ Detects drive
  parameters
  automatically; can
  coexist with another hard drive controller
- ✓ Supports hard drive activity LED
- One 40-pin and one 4-pin male header connectors
- ✓ Includes cable and installation instructions

#### Uses Surface Mount Technology

#### Low-Cost Multi-I/O Cards



#### # MODULAR CIRCUIT TECHNOLOGY

This multi-I/O card features reliable surface mount technology at a lower cost! Control two IDE hard drives, two floppies up to 1.44Mb, two serial ports using 16450 compatible UARTs, one Centronics compatible parallel port and one game port. 16-bit PC compatible ISA card.

MCT-ISPG	1 lb\$4	19.95
MCT-SPG	1 lb\$2	29.95
Serial, par	allel and game only	

#### IDE Floppy/Hard & Multi-I/O Controller

Combine your most frequently-used I/O ports on one card! This expansion board integrates serial, parallel and game ports with an IDE (Integrated Drive Electronics) hard disk interface and floppy controller. It increases your computer's available slots, allowing more room for other interfaces. Your system's reliability will also be improved due to fewer cards and a low-power design. Fast, easy installation.



# MODULAR CIRCUIT TECHNOLOGY

- ✓ 16-bit PC compatible ISA card
- Interface for up to two IDE hard drives
- ✓ Supports up to two 360Kb, 720Kb, 1.2Mb or 1.44Mb floppy disk drives
- ✓ Two NS16450 compatible serial ports, one parallel and one game port
- ✓ Supports serial ports COM1-4 and parallel ports LPT1-3
- All functions can be individually disabled

#### 4-Floppy IDE Card with I/O

By using a fast 2.88Mb floppy controller, this card doubles the data rate to floppy-controlled QIC-80 and QIC-40 tape drives. The result is faster backups! In addition to a tape drive, the card also supports up to four floppy drives, two IDE hard drives, two serial ports and a parallel port. The card can be configured as the primary or secondary IDE controller.

- ✓ 16-bit PC compatible ISA card
- Controls up to 2 IDE hard drives as primary or secondary controller
- ✓ Supports up to four 360Kb, 720Kb, 1.2Mb, 1.44Mb or 2.88Mb floppies
- Two NS16550 compatible serial ports addressable as COM1-COM4
- ✓ One parallel port, addressable as LPT1-LPT3, PS/2 mode compatible
- ✓ Includes 2 floppy plus one hard drive cable and manual

MCT-SIO 3 lbs ......\$149.95



#### I/O Cards

#### High-Performance SCSI-2 Controller

This Future Domain Valuepak includes a fast SCSI-2 controller and software for high-speed data transfer. The card supports up to seven hard drives, even in DOS!

- 16-bit PC compatible ISA card; 16-bit fast SCSI-2 bus
- ✓ Up to 7 SCSI hard drives and devices supported in BIOS, no device drivers required
- ✓ Supports up to two 360Kb, 720Kb, 1.2Mb or 1.44Mb floppy drives
- ✓ CD-ROM, CAM, ASPI, INT13 and WINDISK support
- ✓ Compatible with DOS, Windows, OS/2, Windows NT, NetWare, Banyan VINES, SCO Xenix and more



✓ Includes cable for 2 internal SCSI drives

TMC-1680SVP	3 lbs	\$199.95
TMC-1610MCD	4 lbs D-ROM and hard drive cont	\$119.95
16-bit SCSI-2 C	D-ROM and hard drive cont SCSI drivers	roller kit

#### Add up to 4 Floppy Drives to Your System!

This floppy controller supports up to four floppy drives in any combination of 1.44Mb, 1.2Mb 720Kb and 360Kb formats. No special high-density drivers are required. An on-board BIOS allows booting from high-density floppies on systems without high-density support! For use as a primary controller only.



**₱** MODULAR CIRCUIT TECHNOLOGY

- ✓ 8-bit PC compatible ISA card
- ✓ BIOS supports 4 floppy disk drives
- ✓ Supports up to four 360Kb, 720Kb, 1.2Mb or 1.44Mb floppy drives
- ✓ Includes cables for four drives

MCT-FDC-HD4 1 lb .......\$59.95

#### Promise DC440 Controller

#### VESA Local Bus SCSI-2/IDE Controller



Concerned about available slots in your system? Not sure whether you'll use IDE or SCSI devices?

This card solves both problems by combining SCSI-2, IDE, floppy and I/O on a single VESA Local Bus 2.0 card! You get fast performance and

a flexible path for future hard drive upgrades. This

Bus Mastering card also improves system performance with an on-board 80286 controller,

32-bit PC compatible Intelligent VESA Local Bus

Controls up to seven SCSI-2 or SCSI hard drives using MS DOS 5.0 or later

- ✓ Supports SCSI drives up to 8Gb
- Controls up to two IDE hard drives
- Supports up to two 360Kb, 720Kb, 1.2Mb or 1.44Mb floppy drives
- ✓ Two NS16450-compatible serial ports addressable as COM1-COM4
- ✓ Bi-directional parallel port addressable as LPT1-LPT3
- ✓ Complete with game port
- ✓ Data transfer rates up to 10Mb/sec using Fast SCSI-2 mode
- ✓ Uses IRQ9, 10, 11, 12 or 15
- On-board BIOS makes setup easier
- ✓ Includes internal cables for two IDE and two SCSI hard drives and I/O ports
- ✓ Complete with Corel SCSI device drivers

DC440 3 lbs ......\$229.95

### SCSI Device Cables

reducing system CPU overhead.

2.0 Bus Master card



Daisy-chain additional SCSI devices to your computer with these reliable long-lasting cables. SCSI-2 cables include high-density 50-pin

CBL-DB25-SCSI 1 lb	\$12.95
6' external cable, DB25P-CEN50P	
CBL-SCSI-MM 1 lb6' external cable, CEN50P-CEN50P	\$19.93
CBI-SCSI2-CEN 1 lb	\$29.95
6' external SCSI-2, HDB50P-CEN50P	\$29.95
CBL-SCS12-MM 1 lb	\$27.93

30-Day Money-Back



#### SCSI Terminators

Add an additional SCSI terminator to your SCSI chain and you won't have to adjust termination jumpers or switches

SCSI-TERM	\$9.95
CEN50P connector	
SCSI2-TERM	\$29.95
SCSI-2 terminator HDB50P connector	



#### 2.88MB Controller

This floppy controller features primary or secondary support, 2.88Mb compatibility, keyboard drive reassignment and 4-drive compatibility. Various combinations of up to four internal 2.88Mb, 1.44Mb, 1.2Mb, 720Kb and 360Kb floppy drives are supported. The onboard BIOS supports booting from 2.88Mb floppies. Any drive can be reassigned to A:, allowing booting from any floppy. This card even supports QIC-80 tape format, and can improve tape data transfer rates up to 200%.



# MODULAR CIRCUIT TECHNOLOGY

- ✓ 8-bit PC compatible ISA card
- ✓ Can be used as a primary or secondary\* controller
- ✓ BIOS supports 4\* floppy disk drives
- ✓ Supports up to four 360Kb, 720Kb, 1.2Mb, 1.44Mb or 2.88Mb floppy drives
- ✓ Includes cables for 4 drives and manual

MCT-FDC-ED 1 lb .....

\*Note: When used as a secondary controller, a PC can only support 4 floppy drives

Security Card

Protect your computer from unauthorized access. The Gatekeeper prevents boot-up unless a valid password is entered.

Following authorization, the card becomes invisible to all hardware and software, preventing detection and conflicts with other I/O ports and addresses. Easily plugs into any 8-bit slot.

- ✓ 8-bit PC compatible ISA card
- ✓ 15 passwords, 14 characters max per password
- Interrupts boot process
- Only supervisor can add, delete or change passwords

GATEKEEPER 2 lbs ...... \$49.95

#### 2-Port Game Card

Stop playing computer games by yourself!
Two have more fun than one when you install this card, attach two joysticks, and compete.



- 8-bit PC compatible ISA card
- ✓ Perfect for use with our JSTK-300 or JSTK-400 and your favorite games
- Designed to operate with today's fastest systems

MCT-GAME 1 lb ...... \$29.95

#### Multi-I/O Card

This card lets you combine the I/O features you need most! Modular Circuit Technology's multi-I/O card includes a serial port, sockets for an optional second serial



port, a parallel printer port and a game port. The interface also includes a DB09 to DB25 serial converter, the game port cable and bracket. Two cards can be used in the same computer when more ports are necessary.

- 8-bit PC compatible ISA card
- High-speed serial port addressable as COM1 or 3
- Socket for optional second serial port addressable as COM2 or 4
- DB25S, DB09P and DB15S connectors
- Parallel port addressable as LPT1-3
- ✓ Uses NS16450 compatible UART
- Game port includes cable and connector

MCT-AIO 2 lbs ...... \$49.95

#### NS16550 4-Port Serial I/O

Multi-tasking and multi-user systems need NS16550 compatibility to prevent serial data loss. This card provides four NS16550 compatible serial ports, and you can plug in a second card without any port or IRQ conflicts! Each serial port can be configured to one of eight base addresses and one of eleven IRQ's! NS16550 compatibility prevents data loss by storing more received characters on-chip, so the CPU doesn't have to respond as quickly!

- ✓ 16-bit PC compatible ISA card
- ✓ Four high-speed NS16550 compatible serial ports and two parallel ports
- Each serial port supports one of eight addresses
- Each serial port configurable to IRQ3-IRQ5, RQ7, IRQ9-IRQ15
- ✓ Includes four external DB09P connectors

MCT-AMS+ 2 lbs	\$129.95
MCT-IMS+ 3 lbs	\$169.95
4 serial using 4 addresses 2 parallel 2 ID	F

4 floppy and 1 game port version



Reliable NS16550 Serial I/O for Windows

Our versatile multi-I/O card combines two NS16550-based serial ports with a parallel port and a game port. The high-speed NS16550 is designed for today's demanding multi-tasking operating systems, such as Windows 3.1 and OS/2. The NS16550 is an ideal choice for high performance serial peripherals, such as the fast 14,400 baud fax/modems. Although compatible with standard serial controllers, the NS16550 is designed to buffer incoming and outgoing characters more effectively, allowing faster data transfer rates.

- 8-bit PC compatible ISA card
- One parallel port, addressable as LPT1-LPT3
- Two high-speed NS16550 compatible serial ports, addressable as COM1-COM4
- Complete with one game port
- ✓ Connectors include DB09P, DB25P, DB25S



- Any or all functions can be disabled
- Includes DB09S to DB25P serial converter, cables, bracket and manual

MCT-AIO+ 2 lbs ......\$89.95

PC Diagnostic Card

Avoid hours of agony and the frustration of failure! This bundle combines hardware and software to efficiently diagnose most system problems. It even resolves boot failures because the card displays the codes generated by your BIOS. Also included— AMI Diagnostics, from the maker of the popular AMI BIOS. It helps determine port and IRQ conflicts, system configuration information plus it tests memory and I/O ports.

- 8-bit PC compatible ISA card for systems with a POST-code generating BIOS
- 2-digit 7-segment LEDs mount on-board, on the bracket or externally via a DB15 connector
- ✓ Supports AMI, Award, Phoenix and IBM AT BIOS

PCODE+ 2 lbs .......\$79.95 



## Modems

#### TyIN 2000 PC Communications Center

This complete communications system features a digital answering machine, a fax/modem and a Windows-compatible business audio system, all on one card! The card automatically switches incoming calls between its answering machine, fax and data modem, so you only need one phone line. Includes an input port that connects to a ScanMan 256, so you can scan the materials you will fax. The card is software upgradable, so new powerful features can be added as they become available.

- and business audio
- ✓ 2400/1200/300 bps data modem with 9600/4800 bps send/receive fax
- ✓ Voice mail and mail box capability with touch-tone controlled remote playback
- Line switch automatically detects modem, fax and voice signals



- ✓ 16-bit PC compatible ISA card requires Windows 3.x
   ✓ Combines fax/modem with voice mail, line switch and business audio
   ✓ Hayes AT command-set, MNP2-5, CCITT V.42bis/V.22bis/V.22bis/V.22l and Bell 212A/103 data plus V.29/V.27ter/V.21/T.30/T.6/T.4 Group III and EIA Class 2 compatible
  - ✓ Records wave files at 11KHz and plays back at 11KHz or 22KHz
  - ✓ Uses serial port COM1-COM4
  - ✓ Includes manufacturer's 5-year warranty

TYIN-2000 2 lbs ...... \$99.95

#### Remote Power On/Off



This convenient switch reduces your electricity consumption and allows you to remotely reboot your system. The remote power switch listens for your phone call and automatically powers your system. When you hang up, the switch automati-cally switches the power off, helping save resources. An adjustable power-off delay supports call-back modem operations.

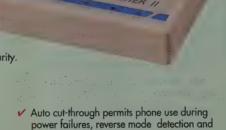
- ✓ Use to power or reboot computer system when a call is placed
- Connects in-line with your computer's modem phone line
- Switch-programmable on-hook delay time and power-on ring count
- Auxiliary port connects fax, answering machine or other device
- Maximum load 1,200 watts at 120VAC,
- ✓ Line, Modem, Auxiliary and input power module ports use RJ11 connectors

POWER-ON 3 lbs ......149.95

#### Fax/Modem Phone Switch

Considering a separate phone line for your fax machine? Get a fax switch instead and save money! It lets you use just one telephone line for your phone, fax, modem and answering machine. This fax switch distinguishes between voice and fax callers, efficiently directing the call to the appropriate device. Modem calls are routed through the use of an access code for additional security. A separate dedicated fax line can run you about \$12.50 per month, so the fax switch actually pays for itself in less than a year!

- Fax, modem, phone and answering machine outputs
- Accepts tone or pulse access codes
- ✓ User-programmable access codes and ring counter to control junk faxes



automatic open line notification when another device is in use

#### Sportster 14,400 External Fax/Modem

US Robotics modems are renown for reliable highspeed data transfer. This modem includes V.42bis data compression and V.42 error control, plus V.32 and V.32bis capability for access to other modems. The built-in fax makes this modem ideal for home and office communication centers.



- 14,400/12,000/9600/7200/4800/2400/1200/300 bps data modem
- ✓ RS232, Hayes AT command-set, V.42bis/V.42/ V.32bis/V.32/ V.25/V.23/V.22bis/V.22/V.21/ MNP2-5 and Bell 212A/103 data plus V.29/V.27/ V.17 and Group III fax compatible
- ✓ 14,400/9600/4800 bps send and receive fax
- ✓ Non-volatile memory stores setup and 4 phone numbers
- 7 status LEDs for AA, CD, RD, SD, TR, CS and
- QuickLink II fax software included
- ✓ Includes AC adaptor, 6-foot modular phone cable and manual

USR-144IF+ Internal Version 3 lbs ...... \$129.95

#### Tech Tip

Do you want to help conserve our earth's probably consumes hundreds of watts of power. Rather than leaving your system on 24-hours a day to receive faxes or modem Off? When it detects an incoming call, it several minutes after the call is complete!

#### Low-Cost 2400 BPS Modem

Already have a 1200 bps modem? Upgrade to this quality-built 2400 bps internal modem and save yourself time and money!



#### # MODULAR CIRCUIT TECHNOLOGY

- ✓ 8-bit PC compatible ISA card
- ✓ 2400/1200/300 bps data modem
- Hayes AT command-set, CCITT V.22bis/V.22 and Bell 212A/103 compatible
- ✓ Auto wait for dial tone, busy detect, auto redial and built-in speaker with volume control
- ✓ Uses serial port COM1-COM4
- Includes 2 RJ11 modular phone jacks, QuickLink II software, 6-foot phone cable and manual

MCT-24I 2 lbs......\$49.95

### GVC High-Speed External Fax/Modem

Let your data fly with this 14,400 fax/modem from GVC. Using V.42bis data compression, this modem can give you up to 24 times the data transfer of a standard 2400 bps modem. Plus, you can send and receive faxes directly from your PC, reducing printing and paper use. Complete with software and manufacturer's 5-year warranty.



- √ 14,400/12,000/9600/7200/4800/2400 bps modem and fax
- Hayes AT command-set, MNP2-5, CCITT V.42bis/ V.42/V.32bis/V.32/V.22bis/V.22/V.21 and Bell 103 data plus Group III fax compatible
- 9 LEDs display modem status
- ✓ Hayes AT command-set compatible
- Includes WinFax LITE and QuickLink II PC software

GVC-144EF 5 lbs .......\$119.95

#### External Modem Cables

Buying an external modem? You'll also need a matching cable to your system's serial port. Choose the cable that matches your system's connector.

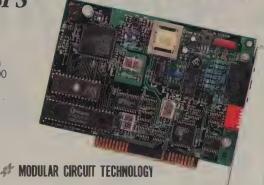
CBL-9-SERIAL 1 lb	\$4.95
CBL-MODEM 1 lb	\$4.95
CBL-MSE-MODEM 1 lb	\$7.95

#### Increase Your Throughput and Save!

## Internal 14,400 BPS Fax/Modem

MCT's modem transfers data up to 24 times faster than a 2400 bps modem! At maximum transfer speeds, a \$40 phone bill using a 2400 bps modem costs a mere \$1.69 using this one! Includes V.42bis and MNP5 data compression plus V.42 error control built in the hardware for faster transmission and reduced connect times. It sends and receives faxes at up to 14,400 bps!

- √ 14,400/12,000/9600/4800/2400 bps modem and fax speed
- ✓ 8-bit PC compatible ISA card
- ✓ Hayes AT command-set, MNP1-5, CCITT V.42bis/V.42/V.32bis/V.32/V.22bis/ V.22/V.21 data plus CCITT V.29/V.27/V.17, Group III, EIA Class 1 and 2 fax compatible
- ✓ Uses serial port COM1-COM4
- Uses 16550 UART for faster throughput



- ✓ Auto wait for dial tone, auto answer, built-in speaker and auto self-diagnostics
- ✓ Two RJ11 modular phone jacks
- ✓ Includes Win Fax LITE software,
   6-foot modular phone cable and manual

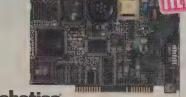
MCT-144IF+ 3 lbs ...... \$99.95

#### True V.34 and V.FC Compatibility!

## High-Performance 28,800 BPS Fax/Modems

Send and receive data or faxes using the fastest transfer rates commonly available! This new fax/modem features true V.34 and Fast Class compatibility, providing data throughput up to 115,200 bps! With over \$300 of included on-line services, you'll be ready to explore the new world of electronic communications. For maximum performance, the internal version includes a built-in 16550 compatible UART.

- ✓ 8-bit PC compatible ISA card
- 28,800/26,400/24,000/21,600/19,200/ 16,800/14,400/12,000/9600/7200/4800/ 2400/1200/300 bps data modem
- √ 14,400/9600/4800 bps fax
- ✓ Uses serial port COM1-COM4, plus IRQ2-IRQ5 and IRQ7
- ✓ Complete with manufacturer's 5-year warranty



#### **U**Robotics

- Hayes AT command-set, MNP2-5, CCITT V.34/ V.FC/V.42bis/V.42/V.32bis/V.32/V.25/V23 V.22bis/V.21 and Bell 103/212A data plus V.29/V.27ter/V.17 Group 3 fax compatible
- ✓ Includes QuickLink II fax communications software, plus over \$300 of on-line services to Prodigy, CompuServe, America OnLine, ImagiNation, Reuters Money Network, GEnie and FarSite

#### 28,800 BPS V.FC Fax/Modem

#### SupraFAXModem 288i

Sprint into the information revolution with Supra's fax/modem. This internal card can communicate with other Fast Class modems at up to 28,800 bps, plus it's downward compatible with 14,400 bps and slower modems. It also sends and receives faxes at up to 14,400 bps! It is ideal for data-intensive communications applications, where it can help reduce phone charges.

- ✓ 8-bit PC compatible ISA card
- 28,800/26,400/21,600/19,200/16,800/14,400/ 9600/7200/4800/2400/1200/300 bps data modem
- ✓ 14,400/12,000/9600/7200/4800 bps fax
- ✓ Includes FaxTalk for Windows and COMit data communications software





- ✓ Hayes AT command-set, MNP2-5/10, CCITT V.FC/V.42bis/V.42/V.32bis/V.32/V.25/V.22bis/ V.22/V.21 and Bell 103/212A data plus V.29/ V.27ter/V.17, Group 3 and EIA Class 1 and 2 fax compatible
- ✓ Uses serial port COM1 COM4

## Networking

HUR-016

#### 5250 Emulation Card

This interface card and software allows your PC to act as a color terminal on an AS/400 mini-computer. The card provides up to two separate sessions and supports remote printer emulation. When used with PC Support, it can upload and download files from

- ✓ 8-bit PC compatible ISA card; compatible with IBM's PC Support, uses IRQ5
- √ 5291, 5292 and 3196 display emulation plus 5224 Model 2 or 5256 Model 3 printer
- ✓ Transfer files from PC to mini-computer and back using your file transfer program



- ✓ Hot key toggle to DOS
- ✓ Includes keyboard template, emulation software, twinax adaptor and manual

LI-5250	4	lbs	\$34	19	.9	5
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HUB-008

GVC External LAN Adaptor

Connect your notebook, palmtop, laptop or desktop computer system to your network without opening your computer's case! This pocket-sized LAN adaptor plugs into BNC and RJ45 type LAN connectors, giving you compatibility with Thin and Twisted-Pair Ethernet cables. And since the unit plugs into your computer's parallel printer port, installation is quick and easy,

requiring no interrupt or port configuration.

- ✓ Centronics parallel printer port compatible interface
- ✓ 10M bits/sec. max transfer
- ✓ BNC Thin and RJ45 Twisted-Pair Ethernet, plus DB25P printer port connectors

Derick's

- ✓ 6 LEDs: power, transmit, receive, collision, link and polarity status
- ✓ Drivers for Novell NetWare, Microsoft LAN Manager, NDIS/ODI compatible systems; includes GVC's 5-year limited warranty

	2 lbs	
PE3-10BC	2 lbs	\$299.95
Xircom Poo	cket LAN Adaptor	

#### 10BaseT Concentrators

It's easy to wire a 10BaseT network using standard twisted pair cable and RJ45 connectors. Unlike thick and thin coaxial Ethernet, 10BaseT operates in a star topology, so cables are not daisy-chained. If one system crashes, it does not bring the

- whole network down too! All of your cables terminate in one location, where the concentrator combines all of the signals to a single thin Ethernet or 10BaseT cable.
- ✓ Couples up to eight 10BaseT twisted pair lines
- ✓ Uses standard RJ45 connectors to 10BaseT nodes
- ✓ Up to seven units may be cascaded using the BNC or 10BaseT port
- Automatically detects switched polarity and
- ✓ Each 10BaseT line may be up to 328 feet long.
- ✓ LEDs indicate utilization, partition, traffic and

HUB-008	8 port version, 5 lbs	\$169.95
HUB-016	9 lbs	\$299.95
16 port ve	rsion with thick adaptor mounts in	standard
19" racks		

#### EtherExpress Ethernet Adaptors

#### LAN Adaptors with Auto Configuration!

Don't waste time with board configuration. Install the first LAN adaptors designed to automatically configure themselves. The included SoftSet utility sets IRQ and bus timing parameters automatically. It detects the hardware installed in your system and adjusts the parameters to prevent conflicts. The reduced chip count gives 16-bit performance at 8-bit prices. Each card offers LANSight Express remote node management software at no extra charge. Complete boardlevel and on-network diagnostics are included.

- ✓ 8/16-bit bus PC compatible ISA card
- ✓ DB15S connector for thick Ethernet and BNC connector for thin Ethernet
- ✓ Includes SoftSet configuration program and drivers for NetWare ELS, 286, 386 and OS/2 requestor, LAN Manager, 3+Open and 3+Share
- ✓ AUI transceiver or RG58 cable
- ✓ 2, 3, 4, 5, 9, 10 and 11 IRQ's manually or automatically set through software



and the same of th	
PCLA8110 2 lbs	\$109.95
PCLA81105PAK 3 lbs	\$469.95
PCLA8120 2 lbs	<b>\$109.95</b> pair
PCLA81205PAK 3 lbs	\$469.95
Intel EtherExpress 32 EISA LAN adaptor	\$439.95

High Tech Corner NECESSITY ENCOURAGES CREATIVITY (AND BESIDES, THERE WAS MONEY INVOLVED) A few weeks ago, I was helping a home builder A few weeks ago, I was helping a home builder whose expanding business required reorganization. In particular, his four PC's were about to jump to eleven, and without a network he anticipated chaos.

After explaining his network software options, and because he was already using MS Windows, he chose a Windows-NT server (for its security and remote access), and Windows for WorkGroups clients.

Then we began our effort to choose a connection method. It wasn't looking good. The building where the offices are located is an old (real old) home on a tree-lined downtown street. Any kind of cablina was

tree-lined downtown street. Any kind of cabling was going to be difficult to run to the back offices, and even

going to be difficult to run to the back offices, and even more difficult to conceal.

But we were in luck. Long before he recognized how much they would come to depend on PC's, the building had been generously wired for phone service.

Using easy to hook up 10BaseT, we wired the front office machines in just a few minutes. It took a little longer to sort out the hidden wiring, but since the cable run was only about 40-50 feet, we stuck with it, and it is running flawlessly.

That's the beauty of 10BaseT, it's easy to hook up, easy to move, and doesn't create any problems when you disconnect a machine while the others continue

you disconnect a machine while the others continue running. And, it's especially nice if you have a laptop you want to put on the LAN (Local Area Network) from time to time

#### LANtastic Network Starter System

LANtastic's starter system is ideal for environments that require a small peer-to-peer Local Area Network. The starter kit includes two network adaptors, the network software, a 25' thin Ethernet cable and terminators—everything you need to start your own LAN. Selected by PC Magazine as Editor's Choice for low-cost LANs, this system is easy to install and expand.

NR2000SKC 4 lbs

NR2000NC 2 lbs\$179.95 NodeRunner/SI 2000 thin Ethernet card and LANtastic software
NR2000NT 2 lbs
NR2000SIC 2 lbs
NR2000SIT 2 lbs \$99.95 NodeRunner/SI 2000 10BaseT card only

<b>L</b> /4	ANTASTIC1 2 lbs ANtastic add-on network software for 1 u	<b>\$89.95</b> Jser
L/4	ANTASTIC5 2 lbs ANtastic add-on network software for 5 c	<b>\$399.9</b> 5 users



An ideal low-cost starter system — easy to install, economical to expand!

#### PCMCIA Ethernet Card

This Ethernet adaptor from Modular Circuit
Technology provides network access to
your PCMCIA-compatible notebook and
laptop computers. Simply plug your network cable into
the coupler, load the software, and you're ready to use
the network data! Versatile coupler features 10BaseT



RJ45 and Thin Ethernet BNC connectors.



# MODULAR CIRCUIT TECHNOLOGY

- ✔ PCMCIA Type II card supports a wide range of notebook, palm-top and desktop systems
- ✓ 16Kb buffer improves transfer rates
- ✓ Hot card insert feature allows the adaptor to be inserted/removed with computer power on
- ✓ Includes DOS ODI-NDIS drivers for NetWare, LAN Manager, Windows for Workgroups, VINES, FTP PC/TCP and NCSA TCP/IP
- Complete with diagnostics software and LED indicators for traffic and link status

CT-	C10BC	2 lbs	***************************************	\$17	9.95	í
	CIODC	7 103	*******************************	. 31/	7.7-	

#### **MCT Network Cards**

These cards feature a jumperless design, so that software can automatically configure the card for you! Each adaptor is NE-2000 compatible, making them compatible with a wide range of network environments. A 16Kb RAM buffer is included for faster network transmission and reception.



#### **# MODULAR CIRCUIT TECHNOLOGY**

- ✓ 8/16-bit PC compatible ISA card
- NE-2000 compatible adaptor is compatible with Novell NetWare, LAN Manager, Windows for Workgroups, Banyan VINES and more
- ✓ Thin net version includes BNC connector with T-adaptor; 10BaseT version uses RJ45 connector
- ✓ Uses IRQs 2, 3, 4, 5, 9, 10, 11, 12 or 15
- ✓ Software configurable I/O addresses 200x, 220x, 240x, 260x, 300x, 320X, 340x or 360x

MCT-10B2 2 lbs	\$49.95
MCT-10BT 2 lbs	
MCT-10BC 2 lbs	\$59.95
MCT-AUI2 1 lb	\$39.95
MCT-AUIT 1 lb	\$39.95

With 10BaseT, 10Base2 & AUI Connectors!



- ✓ 8/16-bit PC compatible ISA card
- ✓ BNC connector for thin Ethernet, RJ45 for 10BaseT and DB15S for thick Ethernet
- NE2000 compatible card includes drivers for Novell NetWare, OS/2 Requestor and LAN Manager
- ✓ Uses IRQs 3, 4, 5, 9, 10, 11, 12 or 15
- Jumper selectable I/O addresses 240x, 280x, 2C0x, 300x, 320x, 340x or 360x
- ✓ Includes BNC T-adaptor





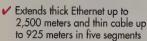
#### Two-Port Ethernet Repeater

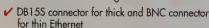
Extend the length of your existing network with this repeater. The unit listens to incoming messages, reconditions the signal and retransmits them on the other side. This bidirectional unit recognizes certain fault conditions and isolates one cable segment from the other when required. To minimize data loss and improve data integrity, the repeater provides automatic preamble regeneration.

- ✓ Thick and thin Ethernet compatible repeater can mix cable types
- Autopartition and reconnection functions isolate network failures
- ✓ Automatic preamble regeneration
- MAU jabber lock up protection prevents faulty transmission condition



#### ACCTON Just right for workgroups





- LED indicators monitor power, transmit/ receive, partition, jabber, collision and faulty FIFO conditions
- ✓ Mounts in standard 19" rack

EN2010 6 lbs ...... \$399.95

#### Network Cable Testers

Why experiment with various cables? Wouldn't you rather test the cable you ran and know if the connectors are properly attached? Why waste your precious time running extra cables or quessing where the problem is?

These network cable testers are ideal for demonstrating whether or not a cable is properly wired. Status LEDs indicate whether the leads are crossed, shorted, connected or open. And you don't have to use extra cables to find out!

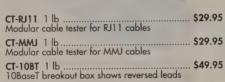
✓ Tests for short, open and cross-wired circuits

✓ LEDs indicated connection status

✓ Coax and twinax testers include a terminator for single-ended testing

✓ Battery-powered units use standard 9V cell

\$49.95 short and open CT-COAX 1 lb .......\$31
Tests BNC and TNC for continuity, short and open



#### Modular Network Cables

Stranded 24-gauge cable for network patch cords. Cables are wired straight-through for standard data requirements.



2-pair cables use RJ11 modular connectors, 4-pair cables use RJ45 modular connectors.

Part#	Calegory	Pair	Length	Price
PHS-4CT3-7	3	2	7'	3.95
PHS-4CT3-14	3	2	14'	4.95
PHS-4CT3-25	3	2	251	7.95
PHS-4CT3-50	3	2	50'	9.95
PHS-4CT3-100	3	2	100'	12.95
PHS-8CT3-7	3	4	7'	4.95
PHS-8CT3-14	3	4	14'	6.95
PHS-8CT3-25	3	4	25'	8.95
PHS-8CT3-50	3	4	50'	11.95
PHS-8CT3-100	3	4	1001	14.95
PHS-8CT5-7	5	4	7'	6.95
PHS-8CT5-14	5	4	141	8.95
PHS-8CT5-25	5	4	25'	11.95
PHS-8CT5-50	5	4	50'	14.95
PHS-8CT5-100	5	4	100'	19.95

#### Network Station Cable

Solid 24-gauge unshielded twisted pair cable is ideal for telephone and data requirements. Use category



3 for signals up to 16MHz and category 5 for signals up to 100MHz.

Part #	Calugary	Pair	Length	Price
CBL-4CT3-100	3	2	1001	8.95
CBL-4CT3-1000	3	2	10001	69.95
CBL-8CT3-100	3	4	100'	9.95
CBL-8CT3-1000	3	4	1000'	79.95
CBL-8CT5-100	5	4	100'	14.95
CBL-8CT5-1000	5	4	1000'	129.95

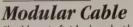
#### Modular Plug Crimp Tool Kit

Sturdy, high quality modular crimp tools for the serious installer. Available alone or in a kit with modular connectors.



HT-210A 1 lb	. \$14.95
RJ45 8P8C metal crimp tool with 10 modular	plugs
PH-1005-8C 1 lb	\$12.95

#### **Preassembled**



Flexible satin-finished cord with straight-through wiring. Straight-through wiring not for telephone use.

Part#	Туро	7'	14	25'
PHS-4C-xx	RJII	1.49	2.49	2.95
PHS-8C-xx	RJ45	2.19	3.49	4.95
PHS-8CK-xx	RJ45 w/key	2.39	3.79	5.49

To order, replace xx in part number with length

#### Modular

#### Connectors

Use with modular flat cable above

Port#	Type	10 pes	25 pcs
PH-8P8C-xx	RJ45	2.99	5.95
PH-8P8CK-xx	RJ45 w/key	3.19	6.39

To order, replace xx in part number with quantity

#### Modular Flat Cable

Produce your own custom cables

Parti	Туре	50	1001	1000'
PH-4CBL-xxxx	4 wire	1.95	2.95	28.95
PH-8CBL-xxxx	8 wire	5.95	11.95	59.95

To order, replace xxxx in part number with length

#### **Network Connectors**



BNC-M Male crimp for RG58	\$1.29
BNC-MT Male twist-on for RG58	
BNC-T2F Adaptor, double F to M	\$3.99
BNC-F Female chassis connector	\$1.69
BNC-2F Female coupler, double	
BNC-T3F 3 Female T adaptor	\$3.99
BNC-TERM-50 50 Ohm line terminator	\$1.99
BAL-COAX Coax balun	\$9.95
TWNX-M Male for twinax cable	\$3.95
TWNX-F Female chassis connector	\$3.95
TWNX-T3F 3 Female T adaptor	\$7.95
TWNX-2F Female connector, double	\$4.95
BAL-TWNX Twinax balun	\$14.95

#### Network Cable

Shielded RG58 cables for thin Ethernet and network applications,  $50\Omega$  impedance



Part #	Length	Weight	Price
RG58-6	6'	1 lb	5.95
RG58-12	12'	2 lbs	8.95
RG58-25	25'	2 lbs	12.95
RG58-50	50'	2 lbs	18.95
RG58-100	100'	3 lbs	29.95

Note: Twinax cables available, please call

#### Keystone Modular Faceplates

Need a specific configuration for your network connections? This modular system may speed your wiring and help you make neater connections! Simply choose the number of cutouts you need, buy a combination of modular connectors for your application and easily crimp the wires in place!

**Wallplates** 

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Part#	Jack	Cond	Price
PH-KJ6	RJ11/12	6	1.95
PH-KJ8	RJ45	8	1.95

#### Modular Network Connectors

#### Modular Couplers

In-line adaptors join two modular flat cable segments together. T-adaptors plug two cables in parallel into a single jack. Each is straight-through configured for network applications. 1 lb.



In-Line Couplers



T-Adaptors

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PHS-2F-6	For RJ11/RJ12 connectors	\$.99
PHS-2F-8	For RJ45 connectors	\$1.95
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PHS-2TF-6 For RJ11/RJ12 connectors ....... PHS-2TF-8 For RJ45 connectors .....

#### Modular Jacks

Surface-mount jacks mount to wall or flat surface. Flush-mount jacks are designed for standard wall cutouts. Screw terminals for network or phone applications. 1 lb.



Surface-Mount



Flush-Mount

Surface	e Mount	
PH-JBS-6	For RJ11/RJ12 connectors	\$1.49
PH-JBS-8	For RJ45 connectors	\$1.95
Flush N	<i>Sount</i>	
PH-WJ-S	One RJ11/RJ12 connector	\$1.49
PH-WJ-D	Two RJ11/RJ12 connectors	. \$1.95

### Accessories

#### Stackable Floppy Files

Now you can stack multiple floppy files and still get to your data! These slide-open file boxes include dividers and a clear front panel with keylock to protect your info. Includes hardware to stack multiple units.

DD-80L Holds 80	2 lbs	\$19.95
<b>DD-180L</b> Holds 18	3 lbs	\$19.95

#### Diskette Organizers High-impact plastic cases with file

dividers for easy organization.



<b>DS-40</b> 40 3-1/2" disk capacity, 2 lbs\$4.95	ı
DS-80 80 3-1/2" disk capacity, 2 lbs \$5.95	ı
DS-50 50 5-1/4" disk capacity, 2 lbs\$4.95	
<b>DS-100</b> 100 5-1/4" disk capacity, 3 lbs \$5.95	ı

#### Expandable Diskette Cube

When closed, this space-saving diskette cube measures only 4" x 3.2" x 4.2". Fully open, it expands to let you view up to 15 of your 3-1/2" diskettes. It makes a safe, convenient holder for your most frequently used diskettes.

ADF-501 1 H		\$4.95
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#### Flight Simulator Yoke

A realistic controller for popular space flight, auto racing & flight programs. Contoured grips with two fire buttons.



JDR-YOKE 3 lbs ..... \$49.95

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Rotating fire button; auto-centering stick with controls.

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With 2 bu	ttons, X and Y controls	

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This sturdy metal keyboard drawer lets you slide your keyboard under your computer or monitor to free up valuable desk space!



Fits most standard keyboards, including enhanced styles

✓ Approx. 15-1/2"L x 22"W x 3-3/8"H

KBD-DRAWER 13 lbs ...... \$29.95

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These 3mW laser pens produce a small dot of light used to point to slide displays, overhead transparencies, etc.



✓ 3mW collimated laser

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LP-BLK Black barrel,	1 lb	\$79.95
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JDR's combo Phillips head/regular screwdriver is a handy shirt pocket addition!

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Self-adhesive mouse holder keeps your mouse off your desk and out of the way when not in use.

M-70 1 lb ...... \$1.95



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PRINT-S80	80-col. version, 4 lbs	\$12.95
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JDR-BINDER 2 lbs



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MS-300 5 lbs ......\$29.95

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TK-COM 3 lbs	\$39.95
25-pc. computer service tool kit	

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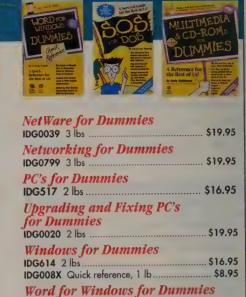
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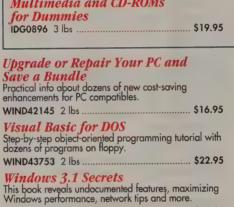
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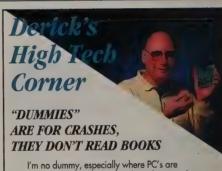
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I'm no dummy, especially where PC's are concerned. I can't afford to be, this is how I make my living. So, I wonder to myself, who are these people who identify with the description "Dummies"?

Could it be that "they" (never us) buy these books to anticipate and diffuse criticism. Probably not, but I will admit the title is catchy. So, are the books any good? Not so surprisingly, yes they are.

I think it is a fair statement to say that I am an "Expert" on DOS so I decided to evaluate "DOS for Dummies" first. Not only does the book present information in a friendly, humorous way, it even manages to cover the esoteric and seldom-mentioned topics that usually hide in the back of the technical manual.

When I began reviewing "Upgrading & Fixing PC's

When I began reviewing "Upgrading & Fixing PC's for Dummies", it was a peculiar experience. Many of the topics covered were written with the same focus and coverage that I would have given them had I been writing the book. The step-by-step nature of discovering the cause of a problem can be daunting to the uninitiated, but this book should be very helpful to the provice or experienced user. novice or experienced user.

My conclusion is that these are not manuals for

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#### Label Your Computer!

Over 200 preprinted vinyl labels identify almost every conceivable description and configuration for PC's, MAC's and networks-no more

tracing cables or auessina which connections to use! Included reference card attaches to your computer.



LABEL-KIT 1 lb.....

#### Fax/Modem/Phone Switch



phone line for your fax machine? Get a fax switch instead and save money! It lets you use just one telephone line for your phone, fax, modem and answering machine. This fax switch distinguishes between voice and fax callers and efficiently directs the call to the appropriate device. A single separate dedicated fax line can run you \$12.50 per month, so the fax switch actually pays for itself in a short period of time! User-programmable access codes and ring counter helps you control junk faxes.

- Fax, modem, phone and answering machine outputs
- Accepts tone or pulse access codes
- User-programmable access codes and ring counter to control junk faxes
- Auto cut-through permits phone use during power failures
- Reverse mode detection and automatic open line notification when another device is in use
- Includes 8-ft. phone cord, AC adaptor and instructions

FAXM-SWITCH 4 lbs ...... \$89.95



By Phone

You may now order 24 hours a day, toll-free! Just dial 800-538-5000 from anywhere in the continental U.S. or Canada. Local and International customers please call 408-494-1400. For fastest phone ordering, fill out the order form ahead of time and keep this catalog handy. Repeat customers can save time by providing their JDR Customer Number. Corporate and Dealer orders are always welcome.

#### By CompuServe

Now you can visit with us at the Electronic Mall on CompuServe. Simply type "Go JDR" to review our latest products or place your order. COMPUSERVE

By BBS

Call JDR's 14,400 baud BBS 24 hours a day for high-speed on-line ordering. You'll also get up-to-the-minute new product information and over 500 megabytes of shareware software in over 5,800 files. Simply dial 408-494-1430.

Catalog Outlet

All the items in this catalog (and more!) are available at our Catalog Outlet located at 1238 S. Bascom Avenue, San Jose, California. Stop by and see us when you're in the neighborhood!

By Fax

Save time by simply faxing us your order. Just complete the order form and fax it to us toll-free at 800-538-5005. Local customers, please fax your order to 408-494-1420.

#### By Mail

Complete the order form and mail it to us with your payment. We accept personal checks, money orders, Visa, Mastercard, the Discover Card and the American Express Card. Credit card orders should include the expiration date.

#### Will Call

Our mail-order facility welcomes will call orders. By calling about one hour ahead of time, we can usually prevent delays. Just call us at 800-538-5000.

# Shipping



We're committed to getting your products to you—fast! In fact, most orders are shipped within 24 hours. We offer a variety of shipping options to suit your budget and needs:

#### Overnight - (1 day)

Available for orders received at JDR by 3 p.m. (Pacific). Contact our Sales Department for specific rates.

#### Ground - (10 days)

For UPS Ground, allow up to 10 working days after shipment for delivery. Add \$5.00 for the first pound, plus approximately \$1.00 for each additional pound.

#### International

We'll ship your order via DHL, Federal Express, UPS, Air Parcel Post, Freight Forwarder or U.S. Surface Mail. For shipping rates, please call our International Sales Department at 408-494-1400. Air - (2 days)

For Airborne, Federal Express or UPS 2nd Day Air, allow 2 working days after shipment for delivery. Add \$7.50 for the first pound, and approximately \$2.00 for each additional pound.

24-Hour Toll-Free Ordering

800-538-5000

For Reliability, our Toll-Free 800 Service is Provided by AT&T

# Payment



#### Credit Card

We welcome VISA, MasterCard, the Discover Card and the American Express Card with no added surcharges. We will not bill your card until your order has been shipped.

#### Check or Money Order

You may also pay by check or money order in U.S. funds (drawn on a U.S. bank). New customers please allow 2 days for processing.

#### C.O.D.

Domestic orders may be shipped Airborne, Federal Express or UPS C.O.D. We welcome cash, money orders, or company checks (prior approval required—please call our Accounting Department). Please add \$5.00 for C.O.D. processing in addition to shipping charges.

#### 30 Day Terms

Please call our Accounting Department for additional information.

#### Terms & Conditions

We are not responsible for typographic errors. We reserve the right to change or correct prices without notice. Your JDR salesperson can confirm the latest price when you order. Specifications and descriptions subject to change without notice. We reserve the right to limit quantities and to substitute manufacturer. All merchandise subject to prior sale. Items pictured may only be representative. A complete copy of our Terms and Conditions of Sale is available upon request.

**Duplicate Catalogs?** 

Are you receiving multiple catalogs with slight variations in name or address? Please help us reduce waste! Send us exact copies of your mailing labels and indicate which we should use. In return, we'll send you a coupon worth \$5.00 towards a future JDR purchase. Send labels to:

JDR Microdevices Attn: Catalog Dept 1850 South 10th St San Jose, CA 95112-4108 Mail List Preference

Occasionally we make a portion of our mailing list available to carefully screened companies whose products or services might complement your JDR purchases. If you'd prefer we withhold your name, send an exact copy of your mailing label to:

JDR Microdevices Attn: Mail Preference Service 1850 South 10th St San Jose, CA 95112-4108

# Programmers

#### Universal Programmer Programs EPROMs, EEPROMs, MPUs, PLDs & More!

MCT's versatile programming system costs just \$699, yet it can program the vast majority of all programmable devices sold today! And, thanks to a pin programmable design, it will also support most of the new devices yet to be introduced!

The "ACCESS" program shell provides a consistent entry point for selecting the correct device from an extensive list of manufacturers and device types. Easy-to-use menus provide on-screen reminders of the options for each device, and simple one-keystroke entries choose from among those options.

Sophisticated programmers take note--if your development needs go beyond the standard programmer, choose from our comprehensive list of PLCC, PGA and multiple DIP adaptor modules sold in our Electronic Components catalog.

This dependable, cost-effective programming system is a tremendous bargain for anyone developing computers or other digital hardware! The system comes complete with the universal programming module, PC host adaptor card, cable and menudriven software. It provides the features and functionality you'd expect to find in a unit costing several thousand dollars--all for just \$699. It's the smart choice for any developer's workbench!

 Programs EPROMs and CMOS EPROMs up to 4M bits including 27C101, 27C100, 571000 and 574000. Also programs PROMs and microprocessors



Switch allows you to answer questions without returning to the keyboard

8-bit PC compatible ISA card. Uses bus address 200, 210...2FØ

- Programming software selections include: Erase, Blank check, Program, Verify, Read, Compare, Edit, Load, Save and Security Fuse Blow; Performs 2 and 4-way splits and shuffles; Utilities to convert popular file formats such as Hex and Extended Hex
- Programs standard PALs, GALs, PEELs, Logic Sequencers and PLD families: C, H, L, M, N, P, R, S, V and X; programs a wide variety of PLDs, EPLDs, EEPLDs and FPLs

MODULAR CIRCUIT TECHNOLOGY

- Programs Microprocessors such as 8742, 8748, 8749 and 8755
- ✓ Tests TTL and CMOS devices, Static and Dynamic RAM, such as 62256's and 414256's
- ✓ Includes programmer, PC Host adaptor card, cable and software

 ...... \$699.00 ..... \$39.95

#### Low-Cost EPROM Programmer

This economical programmer provides the professional or hobbyist with an effective tool for programming most general-purpose EPROMs. Menu-driven software allows easy manipulation of data files, splitting or combining the contents of several EPROMs and many other functions. Programs up to 512K bit devices in up to 28-pin DIP packages. Supports Hex and Intel Hex data file formats.

- Programs standard 27xx and 27xxx EPROMs up to 27512
- ✓ Program voltages include 12.5V, 21V and 25V
- ✓ Includes 8-bit interface card with user selectable address
- Menu-driven software functions include Load file, Save file, Edit buffer, Blank check, Program, Read master and Verify modes



✓ Zero Insertion Force socket accepts 0.6" wide DIP ICs up to 28 pins

#### Expert Level CUPL Lang

This menu-driven, software supports over 100 devices, making it ideal for the serious developer. This compiler-based software automatically reduces your equations to Sum-of-Products or Product-of-Sum forms so you don't have to! Complete with comprehensive library of design examples.

- Supports over 100 devices, including G16V8, G20V8, GAL6001, CY7C330, EP1800, EP300, EP600, EP900, P20V10 and PLS159 families
- Supports Altera, AMD, AMI, Atmel, Cypress, Lattice, MMI, National Semiconductor, SGS Thomson and Signetics

#### PAL Starter Kit

Program some of the most common PLDs manufactured. Menu-driven environment automatically edits source and list files to improve the debugging process. Includes a comprehensive library of design examples. The compiler-based software reduces equations into Sum-of-Products and Product-of-Sums forms.

- ✓ Supports 16L8, 16R4, 16R6, 16R8, 20L8, 20R4, 20R6, 20R8 and 20L10 devices
- Supports AMD, Cypress, MMI and National Semiconductor

#### Tech Tip

The Metex line of Digital Multimeters afters great flexibility! In addition to a wide range of measurements, these meters can send information back to your computer system. Your desktop or notebook PC can monitor data and record it to your hard drive. You can even write code to monitor the data and take action!



#### Includes Serial Port!

#### Metex 4-1/2 Digit Multimeter

This full-function Digital Multimeter has a serial interface, making it ideal for monitoring information via computer. Custom programs can easily and cost-effectively collect data, even in BASIC! The DMM features a 4-1/2 digit display for accurate high-resolution measurements. A bargraph display provides an accurate representation of the measurement.

- RS-232 serial interface for PC compatibles
- √ 4-1/2 digit LCD display with 5/8" characters

AC voltage: 10µV - 750V DC current: 100nA - 20A AC current: 100nA - 20A Resistance: 0.01 ohms - 20M ohms Capacitance: 0.1 pF - 20 µF Frequency: 1Hz - 200KHz

- Transistor hFE, diode and audible continuity tests, bargraph display, maximum/minimum, data hold
- ✓ Basic DC accuracy +/- 0.05%
- ✓ Includes test leads, RS-232C cable, spare fuse, carrying case, PC compatible software and instruction manual

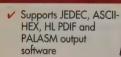
M4650CR	3 lbs	\$149.95
M3650CR 3-1/2 dia	t 3 lbs jit version with serial port	\$99.95
M3850 3	lbsit with serial port; displays 2 cluding temperature	\$109.95 measurements

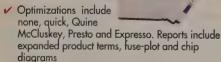
 Optimizations include none, quick, Quine McCluskey, Presto and Expresso

M3850-TC 1 lb ...... Temperature probe for M3850

- ✓ Reports include expanded product terms, fuse-plot and chip diagrams
- ✓ Supports JEDEC, ASCII-HEX, HL PDIF and PALASM output software formats
- Complete with user manual and sample source code

PAL-EXPERT 4 lbs ...... \$399.95





✓ Includes user manual and sample source code

MOD-MPL-SOFT 1 lb .......\$99.95

#### Quickly Program EPROMs Up To 8M Bits!

Modular Circuit Technology's EPROM programmers feature an improved development interface and a device selection guide that is user friendly. Instead of consulting a wall chart when you change a manufacturer or device type, the easy-to-use menu-driven software provides an on-line program-ming guide at the touch of a help key.

Both programmers are capable of programming up to 8 megabit 27xxx and 27Cxxx series 12.5V devices. An 8-bit interface card, cable and complete software is included. Two LEDs indicate status to prevent unintentional removal or insertion during programming

Software allows "splitting" and "shuffling" of 8, 16 and 32-bit code for byte, word and double word systems development.

- ✓ Includes 8-bit PC compatible ISA controller card with 16 device starting
- Programs most devices from 2716 to 27512 including 27C100, 27C101, 27C301, 27C1000, 27C1001, 27C2001, 27C4001 and others
- Supports devices from AMD/MMI, Atmel, Catalyst, Fujitsu, Hitachi, Intel, Microchip, Mitsubishi, MXIC, National Semiconductor, NEC, OKI, Ricoh, Samsung, Seeq, Sharp, Signetics, S-MOS, SGS, TI, Toshiba, VLSI, WSI and Xicor



- Supports intelligent and Quick Pulse modes for fastest programming.
- ✓ ZIF Zero Insertion Force socket accepts DIP ICs up to 32 pins and 0.6" wide. PLCC adaptors available
- Functions include Manufacturer and Device type selection, Read, Compare, Blank Check, Auto Program, Verify, Display, and Load and Save files, Edit and Display buffer, Setup, hex to binary converter, 2 and 4-way file splitter and 2 and 4-way file shuffler

MOD-MEP-4A 3 lbs ... 4 gang unit programs up to 4 devices simultaneously MOD-EMAC 2 lbs .. Additional host adaptor card and cable

#### Datarase II EPROM Eraser

This effective, low-cost eraser gets the job done for less! The pocket-sized unit simultaneously handles up to four EPROMs.

- Accepts any standard EPROM
- Includes wall plug power supply
- Quick erase time

DATARASE II 1 lb ...... \$39.95 DATARASE IIT 2 lbs \$49.95
Above with built-in timer



#### Portable IC Tester

Our hand-held IC tester is an easy-to-operate, cost-effective unit with superb functionality. It can easily pay for itself by reducing development time and identifying unmarked parts. The LCD display presents simple menu-like prompts in English, making this tester's operation easy and intuitive. It supports common families of ICs including 74 series TTL, 40 and 45 series CMOS.

- Supports common 74 series TTL, 40 and 45 series CMOS and 256K and 1M DRAMs
- ✓ ZIF socket accepts DIP devices up to 20 pins
- ✓ 16-character LCD displays test results and can identify unknown devices

MODULAR CIRCUIT TECHNOLOGY

# Storage

#### Preformatted Bulk Diskettes

Order these preformatted 3-1/2" and 5-1/4" floppy diskettes in bulk and you'll always have a supply of ready-to-use diskettes at your fingertips! Includes sleeves, labels and write-protect tabs. (Shipping



Description	Qua	ntity
Description	250	50
MD2D-BULK 5-1/4" 360Kb DS/DD disks	25 ea	.29 ea
MD2H-BULK 5-1/4" 1.2Mb DS/HD disks	41 ea	.45 ea
<b>3.5D-BULK</b>	39 ea	.45 ea
3.5HD-BULK	43 ea	.49 ea

#### Hard-To-Find Disk Drive Accessories

#### "Y" POWER SPLITTER

Adds additional 4-pin drive connector to your power supply. Fits all standard power supplies.



FDD-5Y 1 lb	\$2.95
FDD-5S Female connector, 1 lb	
FDD-5P Male connector, 1 lb	\$1.19
HT-213 Crimping Tool	\$9.95

TEAC FLOPPY FACEPLATE		
FD-55FP 1 lb Beige faceplate for TEAC FD-55	\$ B	5.95

#### DRIVE MOUNTING HARDWARE

Piggyback two half-height drives in your 8088 or compatible.

FD-55MHW 1 lb ...... \$2.95



#### FLOPPY DRIVE CASE

Mount that extra drive
in a sturdy metal
case and keep it
safe. This case is
ideal for systems without room
for that extra drive! This low-profile case holds one

for that extra drive! This low-profile case holds one 5-1/4" half-height drive in the 9-7/8"L x 5-7/8"W x 2"H case. Includes a DB25 cut-out on rear panel.

EC-541	4 lbs		\$19.95
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#### FLOPPY DRIVE FRAMES

These metal frames let you mount your 3-1/2" drives in a 5-1/4" slot. Includes faceplate. For standard 5-1/4" installations.



FDD-ADAPTOR 1 Black faceplate	lb		\$9.95
FDD-ADAPTOR-A Cream faceplate	1	lb	\$9.95

#### HARD DRIVE FRAMES

Mount your 3-1/2" hard drives safely using these 5-1/4" slot adaptors. Metal frames accept 1" and half-height drives.

HD-MHW Black frame, 1 lb	

SCR-KIT	1 lb	19
Set of 8	mounting screws (4 metric, 4 English mredd)	

#### DISK DRIVE RAILS

Kit includes 2 rails and 4 pan headscrews. Fits all standard 286/386/486 compatible slots.



FDD-ARAIL 1 lb ......\$2.95

#### DRIVE BLOCK-OUT BEZELS

These bezels seal the gap that remains when you install (or remove) a half-height drive in a full-height slot.



BE	CEL-HH 1 lb	2.95
П	r-neight block-out bezei	
BE	ZEL-FH 1 lb	\$3.95

#### Verbatim-Media You Can Rely On!

Whether you operate a sophisticated corporate system or a home-based PC, data integrity and safety are paramount. From floppies to DAT to rewritable optical disks, Verbatim offers a full line of dependable products.

#### Rewritable Optical Disks

Verbatim 5-1/4" rewritable optical disks provide high-capacity storage for LANs, minis and mainframes. 3-1/2" rewritable optical disks are perfect for PCs and workstations. Both conform to ISO/IEC standards. Shipping weight 1 lb each.

PART #	SIZE	CAPACITY	PRICE
V-87895	5-1/4"	512 B/S 600MB	84.95
V-88012	3-1/2"	512 B/S 128MB	39.95
V-89109	5-1/4"	1024 B/S 1.3GB	129.95
V-89185	STD	74 MIN WRITABLE CD-ROM 640MB	22.95

#### Magnetic Tape Products

Choose from 1/4" data cartridges, streamers and DAT formats.

#### 1/4" Data Cartridges

PART #	DESCRIPTION	PRICE
V-87989	DC2000 UNFORMATTED	11.95
V-87982	DC2120 UNFORMATTED	15.95
V-88172	DC2120 QIC80 FORMATTED	19.95
V-89121	DC9210 UNFORMATTED	44.95
V-89045	DC9120 UNFORMATTED	39.95
V-90745	MC3000 UNFORMATTED	26,95

Streamer Co	ırtridges	
PART #	CAPACITY	PRICE
V-86450	30/60MB	15.95
V-87695	160MB	16.95

4mm & 8	mm DA	T Formats	
PART #	SIZE	CAPACITY	PRICE
V-88038	4MM	1.3GB (60M)	10.95
V-88195	4MM	2.6GB (90M)	12.95
V-87698	8MM	5.0GB (112M)	9.95





#### Floppy Diskettes

Each package of 10 Verbatim DataLife floppy diskettes and labels puts an end to "sector not found" worries! Preformatted floppies are ready to run on IBM PC-compatible systems. Teflon-coated DataLife Plus floppies provide maximum protection from data-damaging dust and common surface debris.

PART #	SIZE	CAPACITY	COLOR	PREFORMATTED?	PRICE
V-87644	3-1/2" DSDD	720KB	GREY	TEFLON/YES	8.95
V-86269	3-1/2" DSHD	1.44MB	GREY	NO	8.95
V-87410	3-1/2" DSHD	1.44MB	GREY	YES	9.95
V-87326	3-1/2" DSHD	1.44MB	RAINBOW	YES	11.95
V-87706	3-1/2" DSHD	1.44MB	GREY	TEFLON/YES	12.95
V-87066	5-1/4" DSDD	360KB	GREY	TEFLON/YES	5.95
V-87324	5-1/4" DSHD	1.2MB	RAINBOW	YES	8.95
V-87252	5-1/4" DSHD	1.2MB	GREY	TEFLON/YES	8.95

#### Storage

#### 1.2MB 5-1/4" Drive

Replace your 360Kb drive with this high density 5-1/4" half-height model and use fewer floppies! Includes mounting rails, screws and complete installation instructions.

✓ Formats 1.2Mb and 360Kb diskettes

✓ 96 TPI, 80/40 tracks, 15/9 sectors per track

#### 2.88MB 3-1/2" Drive

Now you can backup a 20Mb hard drive on just 7 floppies, without using a data compression program! Since this drive is compatible with the other

3-1/2" formats, you can interchangeably use economical or high-density floppies.

- Supports 2.88Mb, 1.44Mb and 720Kb 3-1/2" diskettes
- 135 TPI, 80 tracks, 36/18/9 sectors/track
- ✓ 3-1/2" half-height drive includes 5-1/4" mounting frame and hardware

FDD-2.88A 2 lbs ......\$99.95 Box of ten 2.88Mb floppy disks \$39.95

Note: FDD-2.88A requires a 2.88Mb controller card such as our MCT-FDC-ED

3-1/2" & 5-1/4" Floppy Drive Combined!

Epson Combo Floppy Drive

Put a 5-1/4" and 3-1/2" floppy drive in ONE SLOT! Even 3-slot systems will

**EPSON** have room for tape and

CD-ROM drive upgrades! A flexible jumper system provides independent address selection for each drive, and lower consumption can improve your system's reliability. Cream colored faceplate.

- Supports 1.2Mb/360Kb 5-1/4" and 1.44Mb/ 720Kb 3-1/2" diskettes
- ✓ 5-1/4" half-height drive reduces slot usage
- 34-pin edge connector and 4-pin power

FDD-COMBO 3 lbs .......\$109.95

#### Tech Tip

Need more time in your work day? You can save time by using preformatted floppies and tapes! Instead of waiting as much as 1 hour for a tape to format, you simply pop the tape in your drive and start the backup! And if you frequently format floppies, you'll save time with our preformatted floppies too!

1.44MB 3-1/2" Floppy Drives

These value-priced 3-1/2" floppy drives offer compact size, high density and improved reliability! They double the capacity of older 720Kb floppy drives and hold 20% more data than high-density 5-1/4" floppies.

- ✓ Supports 1.44Mb and 720Kb diskettes
- ✓ 135 TPI, 80 tracks, 18/9 sectors per track

FDD-1.44A 2 lbs	\$59.95
FDD-1.44X 2 lbs	\$59.95

Black taceplate

TEAC Combo 3-1/2" and 5-1/4" Floppy Drive

#### Get Two Floppy Drives in One Slot!

Don't let the lack of drive slots keep you from upgrading your system! Teac's combo drive lets you combine both a 1.2Mb 5-1/4" floppy drive and a 1.44Mb 3-1/2" floppy drive in the space of one 5-1/4" half-height slot!

By combining two drives into one slot, even systems with limited drive slots have room to add a CD-ROM  $\,$ or tape drive to their standard system case! Flexible jumpers provide each drive with independent select addresses, and low power consumption improves your system's reliability.

- ✓ Supports 1.2Mb/360Kb 5-1/4" and 1.44Mb/ 720Kb 3-1/2" diskettes
- ✓ 5-1/4" half-height drive minimizes slot usage
- 34-pin header connector and 4-pin power

PCMCIA Slots for Your Desktop Computer

Share your PCMCIA cards on your desktop office computer too! Data I/O's CardPro 2 mounts in any 3-1/2" drive bay, allowing you to add PCMCIA capability to your desktop system. Transfer files from your notebook to your desktop system using a memory card or share a hardcard, fax/modem or other PCMCIA peripheral. Simply plug your card into the new PCMCIA slot and you're ready to go!



#### DATA I/O PCMCIA cards not included

- 16-bit card is 68-pin PCMCIA 1.0 and 2.0, JEIDA 4.0 and 4.1, Type I, II, III and larger compatible
- Supports PCMCIA memory and peripheral
- Reads all memory-card technologies; writes to SRAM and Flash cards
- ✓ Mounts in 3-1/2" floppy drive slot
- Includes card-driver software and Microsoft Flash File System 2

CARDPRO2-I	3 lbs	\$329.95
CARDPRO2-E	3 lbs	\$389.95
External drive	version of above	



Black 5-1/4" mounting hardware for 3-1/2" drives

Cream-colored faceplate

FDD-ADAPTOR 1 lb ..

- Independent jumper selectable drive addresses
- Includes mounting rails, screws and instructions

FD-505 3 lbs ......\$129.95

Add 2 Slots to Your Desktop!

#### PCMCIA Card Slot



Plug your PCMCIA 2.0 cards into your desktop system with this card slot adaptor. Simply mount the drive in a 3-1/2" floppy drive slot, install the 16-bit ISA card and load the software. Your system will have access to a wide range of PCMCIA devices! Hot swapping allows insertion and removal of devices, including hard drives, while your computer

- 16-bit ISA card is 68-pin PCMCIA 2.0, JEIDA 4.1, Intel ExCA, Type I, II, III and larger compatible
- ✓ Supports Hot Swapping and Plug & Play
- Accepts two Type I/II cards, one Type I/II and one Type III card, or one Type IV card
- ✓ Mounts in 3-1/2" floppy slot
- ✓ Includes self-installing driver software

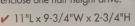
#### **Conner Hard Drives**

Designed primarily for laptop and desktop computer systems, Conner hard drives offer low power consumption, high-reliability and a low-cost interface. Based on 3-1/2" IDE technology, these drives are designed to withstand intense amounts of shock. Each features a look-ahead read buffer, automatic head retraction and high-performance, voice actuated heads. The low power requirements enable battery operation in laptop and notebook environments. New power saving commands support "Green PC" applications.

MODEL	CAPACITY	SPEED	CACHE	INTERFACE	FORM	HEIGHT	¢/Mb	PRICE
CFS-210A	213Mb	14ms	32Kb	IDE	3-1/2"	1"	85¢	179.95
CFS-420A	426Mb	14ms	32Kb	IDE	3-1/2"	1"	57¢	239.95
CFA-540A	540Mb	12ms	256Kb	IDE	3-1/2"	1"	56¢	299.95
CFA-850A	850Mb	12ms	256Kb	IDE	3-1/2"	1"	56¢	469.95
CFA-1275A	1.08Gb	12ms	256Kb	IDE	3-1/2"	1"	50¢	629.00

#### SCSI Drive Case

This low-profile case is designed for SCSI hard drives, tape drives and CD-ROM drives. It can enclose one half-height drive.



- √ +5V @ 1.5A, +12V @ 2.0A power supply
- ✓ Holds one 5-1/4" half-height or 3-1/2" SCSI hard drive, tape drive or CD-ROM
- √ 110/120VAC, 50/60 Hz input
- ✓ External SCSI address select switch
- ✓ Includes cooling fan and internal cables

ED-120 6 lbs ......\$129.95

# Trakker 250Mb Parallel Port Backup

Now, you can track down your data wherever it is and keep it secure with reliable tape backups. The Trakker portable tape drive from Colorado Memory Systems is a self-contained backup system that's compact and light-weight enough to take wherever the computer is. At home, it lets you quickly and easily backup the data on your notebook or laptop PC. Then take it to your office to backup the data on your desktop PC system. This one unit does both. Operation is easy, too! Simply plug the drive into the parallel printer port of any compatible system and run the software. The Trakker is a great solution for a shared backup among several computer systems. It's the smart choice for multisystem office network environments, field executives or anyone requiring a convenient and versatile data backup system.

- PC compatible drive operates in DOS, NetWare and LANtastic environments (requires minimum 386 processor)
- ✓ Reads QIC-40 and read/writes QIC-80 tapes
- ✓ Up to 8Mb per minute transfer rate
- ✓ Connects to IBM-compatible parallel printer port

JT-20 6 lbs	 	 \$339.95
JT-35C 340Mb version,		
JT-25 680Mb version, 6		

#### 3-1/2" Drive Case

This low-profile external drive case gives you more work area by using less desk space. Designed for 3-1/2" SCSI hard drives and tape drives, the case features a snap-in faceplate.

- ✓ 9"L x 6-3/4"W x 2-3/4"H
- ✓ Holds one 3-1/2" SCSI hard/tape drive
- ✓ Disk activity and power-on LEDs
- ✓ 110/120 VAC, 50/60Hz input
- ✓ External SCSI address select switch
- ✓ Includes cooling fan and internal cables

ED-150 6 lbs ......\$129.95

#### Customer Testimonial

"... I am writing this brief note to let you know of my satisfaction with JDR's handling of my recent order. Small as it was, the several employees who handled it were extremely courteous, knowledgable and helpful..."

- J. Villanova, Stamford, CT

#### Removable Hard Disk Rack



Need secure data protection—or want to share data on several computer systems? Our Removable Hard Disk Rack lets you have both! And, you can remove your hard drives from your system without powering off your PC! Mount your 3-1/2" hard drive in our rack, then mount the rack in a 5-1/4" half-height slot. Includes all cables and connectors.

- ✓ Uses a standard 5-1/2" half-height drive slot
- ✓ Accommodates one 3-1/2" IDE drive
- ✓ Key switch locks drive in place
- ✓ 2 keys, sturdy metal fixed rack with removable slide out tray and installation instructions

MOBRK-3.5-IDE 3 lbs	. \$119.95
MOBRK-3.5-\$ 3 lbs	. \$119.95
MOBRK-RACK-I 2 lbs	\$69.95
MOBRK-RACK-S 2 lbs	\$69.95
MOBRK-SLIDE-I 2 lbs	\$59.95
MOBRK-SLIDE-S 2 lbs	\$59.95
MOBRK-CC 2 lbs	\$24.95

#### The Hard Disk Technical Guide



This book includes set-up specs and procedures for over 1,700 HDs and controllers, and how to match them with BIOS tables and interface types. Includes installation procedures, glossary, controller and HD jumper settings plus more.

#### Hard Disk Drive Encyclopedia

This 2-book set has specifications and jumper settings for over 2200 HDs! Includes drawings on 100's of controllers, plus jumper and connector locations.



	8 lbs	
CD-HDD-ENG CD version v	CY 1 lbvith 1 year of quarterly updates	\$179.95

#### Central Point Backup Software

This renown backup program removes the confusion that other backup programs create, and you'll get a host of other features too! The latest version supports DAT and 8mm SCSI tape drives, backs up Novell bindery, trustee and extended file attributes, encrypts data and even scans for over 1,300 viruses! Adaptive data compression effectively doubles media space.

 CP-BACKUP-W 3 lbs
 \$89.95

 Windows version on 3-1/2" floppies

 CP-BACKUP 3 lbs
 \$89.95

 DOS version on 3-1/2" floppies



#### **PCMCIA** Hard Drive This credit-card size hard drive

is ideal for quickly exchanging large amounts of data between

MiniStor.

PCMCIA notebook and desktop systems. No time consuming serial or parallel data links, no expensive docking stations and the data can easily be exchanged. Designed for demanding, rugged portable computing environments, these drives employ ImpacSAFE technology to prevent data loss or corruption due to shock or vibration.

- ✓ Plug & play PCMCIA drive requires no jumpers
- Hot swap capability allows removal without powering down
- 16ms average access rate
- 32Kb on-board cache for increased throughput
- ✓ Weigh less than 3 ounces

MP260P-R 2 lbs \$35 260Mb Type III drive when using included Stacker Anywhere compression software \$399.95

#### Drive Pro—Hard Drive Utility

An easy hard drive setup utility for installing IDE, SCSI, ESDI, or MFM/RLL hard disks. Drive Pro performs low level formatting, partitioning, and DOS format, and sets CMOS memory! Can also save



CMOS and System tracks for easy recovery. DRIVE-PRO 2 lbs ...... \$79.95

#### Conner 3-1/2" 250Mb Tape Drive

There's no excuse for not backing up your important data! This low-cost Conner 250Mb tape drive provides a lot of security for a minimal investment. Use it to regularly back up your system and you'll not only protect your precious data, but create an invaluable archive of old information as well. Installation is as easy as mounting the drive in a 3-1/2" or 5-1/4" slot, connecting to power and floppy cables, then installing the software. The bundle includes Conner Backup Basic, which allows you to back up your hard disks.

- ✓ PC compatible tape drive operates under DOS (requires minimum 286 processor)
- Reads QIC-40 and read/writes QIC-80 formatted tapes
- Transfer rates up to 9.5Mb/minute when connected to a 1Mb per second floppy controller
- ✓ Internal drive mounts in 3-1/2" or 5-1/4" drive bay
- ✓ Includes DOS backup software, tape and manual

#### Seagate Hard Drives

Upgrade to a new, high-quality, high-capacity Seagate hard drive — our prices have never been lower! JDR stocks Seagate drives for a wide range of performance platforms and needs. You'll find drives for desktop PC upgrades, workstation upgrades and more.

For faster IDE performance, each of Seagate's listed IDE drives now support Fast ATA, with the exception of the ST-3290A. The Fast ATA interface supports data transfer rates up to 13.3Mb/sec when used with PCI and VESA Local Bus controllers. You get accelerated performance with a lower cost of integration than SCSI solutions can provide

When very high performance is required, consider Seagate's Fast SCSI-2 drives. These drives are optimized for high-end, multitasking applications like file servers, RAID, multimedia, etc.



CAPACITY	SPEED	САСНЕ	FORMAT	FORM	HEIGHT	¢/Mb	PRICE
214Mb	16ms	32Kb	IDE	3-1/2	1"	80¢	169.95
263Mb	16ms	64Kb	IDE	3-1/2	1"	73¢	189.95
341Mb	13ms	120Kb	IDE	3-1/2	1"	65¢	219.95
428Mb	14ms	120Kb	IDE	3-1/2	1"	54¢	229.95
545Mb	14ms	256Kb	IDE	3-1/2	.75"	54¢	289.95
722mb	12ms	256Kb	IDE	3-1/2	7 11	54¢	389.95
1.22Gb	12ms	256Kb	IDE	3-1/2	1"	52¢	629.00
545Mb	12ms	256Kb	Fast SCSI-2	3-1/2	.75"	63¢	339.95
1.05Gb	10ms	256Kb	Fast SCSI-2	3-1/2	1"	58¢	599.00
2.1Gb	10ms	256Kb	Fast SCSI-2	3-1/2	HH	58¢	1199.00
2.1Gb	9ms	1024Kb	Fast SCSI-2	3-1/2	HH	65¢	1359.00
4.2Gb	9ms	1024Kb	Fast SCSI-2	3-1/2	HH	58¢	2399.00
	214Mb 263Mb 341Mb 428Mb 545Mb 722mb 1.22Gb 545Mb 1.05Gb 2.1Gb	214Mb         16ms           263Mb         16ms           341Mb         13ms           428Mb         14ms           545Mb         14ms           722mb         12ms           1.22Gb         12ms           545Mb         12ms           1.05Gb         10ms           2.1Gb         9ms	214Mb         16ms         32Kb           263Mb         16ms         64Kb           341Mb         13ms         120Kb           428Mb         14ms         120Kb           545Mb         14ms         256Kb           722mb         12ms         256Kb           1.22Gb         12ms         256Kb           545Mb         12ms         256Kb           1.05Gb         10ms         256Kb           2.1Gb         10ms         256Kb           2.1Gb         9ms         1024Kb	214Mb         16ms         32Kb         IDE           263Mb         16ms         64Kb         IDE           341Mb         13ms         120Kb         IDE           428Mb         14ms         120Kb         IDE           545Mb         14ms         256Kb         IDE           722mb         12ms         256Kb         IDE           1.22Gb         12ms         256Kb         IDE           545Mb         12ms         256Kb         Fast SCSI-2           1.05Gb         10ms         256Kb         Fast SCSI-2           2.1Gb         9ms         1024Kb         Fast SCSI-2	214Mb         16ms         32Kb         IDE         3-1/2           263Mb         16ms         64Kb         IDE         3-1/2           341Mb         13ms         120Kb         IDE         3-1/2           428Mb         14ms         120Kb         IDE         3-1/2           545Mb         14ms         256Kb         IDE         3-1/2           722mb         12ms         256Kb         IDE         3-1/2           1.22Gb         12ms         256Kb         IDE         3-1/2           545Mb         12ms         256Kb         Fast SCSI-2         3-1/2           1.05Gb         10ms         256Kb         Fast SCSI-2         3-1/2           2.1Gb         10ms         256Kb         Fast SCSI-2         3-1/2           2.1Gb         9ms         1024Kb         Fast SCSI-2         3-1/2	214Mb         16ms         32Kb         IDE         3-1/2         1"           263Mb         16ms         64Kb         IDE         3-1/2         1"           341Mb         13ms         120Kb         IDE         3-1/2         1"           428Mb         14ms         120Kb         IDE         3-1/2         1"           545Mb         14ms         256Kb         IDE         3-1/2         .75"           722mb         12ms         256Kb         IDE         3-1/2         1"           1.22Gb         12ms         256Kb         IDE         3-1/2         1"           545Mb         12ms         256Kb         Fast SCSI-2         3-1/2         .75"           1.05Gb         10ms         256Kb         Fast SCSI-2         3-1/2         1"           2.1Gb         10ms         256Kb         Fast SCSI-2         3-1/2         HH           2.1Gb         9ms         1024Kb         Fast SCSI-2         3-1/2         HH	214Mb         16ms         32Kb         IDE         3-1/2         1"         80¢           263Mb         16ms         64Kb         IDE         3-1/2         1"         73¢           341Mb         13ms         120Kb         IDE         3-1/2         1"         65¢           428Mb         14ms         120Kb         IDE         3-1/2         1"         54¢           545Mb         14ms         256Kb         IDE         3-1/2         .75"         54¢           722mb         12ms         256Kb         IDE         3-1/2         1"         54¢           1.22Gb         12ms         256Kb         IDE         3-1/2         1"         52¢           545Mb         12ms         256Kb         Fast SCSI-2         3-1/2         .75"         63¢           1.05Gb         10ms         256Kb         Fast SCSI-2         3-1/2         1"         58¢           2.1Gb         9ms         1024Kb         Fast SCSI-2         3-1/2         HH         65¢

#### Seagate IDE Drive Kits

Our kit has everything you need to add a Seagate IDE hard drive to your system: a hard drive in the capacity of your choice, a 16-bit floppy/hard drive controller, cables, and both 3-1/2" and 5-1/4" mounting hardware. Our easy instructions describe drive and controller installation, partitioning and formatting. Each Seagate IDE hard drive is factory low-level formatted, simplifying the installation process.

- ✓ 16-bit PC compatible ISA card
- ✓ Seagate 214Mb ST-3250A drive with 16ms average access time
- 16-bit controller interfaces two hard and two 360Kb, 720Kb, 1.2Mb or 1.44Mb floppy drives
- 16ms average access time

HDKIT-210 6 lbs	\$189.95
214Mb 16ms ST-3250A drive	
HDKIT-341 6 lbs	\$239.95
341Mb 13ms ST-3391A drive	

#### Colorado Memory Systems

#### 250Mb\* Tape Backup System

Here's the quick, convenient, low-cost way to backup all your important data! With Colorado Memory System's Jumbo tape drives, you can store up to 250Mb\* on a single DC2120 mini-cartridge tape!

These drives provide all the performance and capacity of full-size data cartridges using low-cost, proven 1/4" mini-cartridge technology. The included DOS software lets you schedule automatic backups for your system when it's convenient for you! Compatible with popular networks from Novell, 3COM, LANtastic and more.

PC compatible tape drive operates under DOS, Novell, 3COM, LANtastic and more

- ✓ Reads QIC-40 and reads/writes QIC-80 formatted tapes
- ✓ Up to 6.7Mb per minute transfer rate
- ✓ Includes backup software with scheduler for DOS, 3-floppy drive cable, mounting rails and manual
- Connects to floppy controller with included cable
- ✓ 5-1/4" internal half-height drive

	WINDHOLD SIGH EMBING
DJ-20 4 lbs	\$169.95
FC-20 3 lbs	\$99.95
Interface card accelerates backup speed	
DJ-10 4 lbs	\$99.95
120 Mb* QIC40-only tape drive	
PD-60 5 lbs	\$1199.00
New! 4Gb* PowerDAT SCSI tape drive	
PT-25 5 lbs	\$1099.00
2.4Gb* streaming tape drive	
PT-50 5 lbs	\$1399.00
4.0Gb* streaming tape drive	

\*Note: Maximum tape capacity using data compression

COLORADO

#### Great for Beginners! Low-Cost CD-ROM Drive

We're offering these low-cost Philips CD-ROM drives at a price that's hard to beat! These brand new units are ideal for anyone wanting to get started in the world of CD computing. You'll gain access to a wealth of titles and reference material. And with the latest search algorithms, you'll find information faster than thumbing through a book!



- ✓ 8-bit 286/386/486 PC compatible card
- ✓ IRQ channel selects include 3, 4, 5 or 6
- ✓ I/O port address selects include 300x, 310x, 330x and 340x
- ✓ 150Kb per second sustained transfer rate
- ✓ 375 millisecond average access time
- 16-pin header, 4-pin power, 3-pin line-out and two RCA audio-out connectors
- Complete with MS-DOS CD-ROM extensions, device driver and automated set-up software
- Includes 5-1/4" half-height internal drive, front panel headphone jack w/volume control, interface card, cables and manual

CM-205 4 lbs ...... \$69.95

#### Chinon 535 Dual-Speed CD-ROM Drive

Chinon's 535 Series CD-ROM drive features a fast double-speed (300Kb/second) and standard speed mode. The faster mode is ideal for multimedia applications, where large amounts of video data can frequently cause distracting pauses or lapses in the presentation. The fast 280ms access

- 5-1/4" internal SCSI-2 drive is MPC, Multisession Photo CD, Quick Time, ISO 9660, High Sierra and XA compatible
- 300Kb/second data, 150Kb/second audio, 280ms average access time

time will reduce delays in getting to your data.

- 256Kb cache buffer
- Front panel headphone jack with volume control for audio

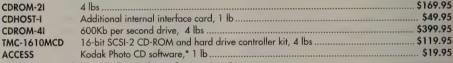
CDS-535	5 lbs		\$289.95
		bsd for above	. \$99.95

#### Low-Cost Double-Speed CD-ROM Drive

#### Ioin the CD-ROM Revolution!

Our low-cost internal CD-ROM drive helps make multimedia affordable, and it's MPC compatible! A single CD-ROM disk can hold up to 680Mb of information, opening up a new world of information to your computer! By combining stunning video and crisp audio presentations, the CD-ROM creates an interactive learning environment that cannot be matched using standard video products. The drive is fully compatible with Multisession Photo CD, High Sierra and ISO 9660 formats-the standards for the CD-ROM industry.

- ✓ 16-bit PC compatible ISA card
- ✓ 5-1/4" internal drive is MPC, Multisession Photo CD, High Sierra and ISO 9660 compatible
- ✓ IRQ channel selectable 3, 5, 9, 10 or 11
- ✓ DMA channel selectable 5, 6 or 7
- ✓ 150Kb-350Kb per second, 250ms average access time
- ✓ 40-pin header, 4-pin power, mini 4-pin line-out and two RCA audio-out connectors
- ✓ Includes front panel head phone jack with volume control, interface card, manual and software



# \*Note: Only available with the purchase of a CD-ROM drive

#### **NEC MultiSpin CD-ROM Drives** Triple Speed Technology! NEC's CDR-3Xi internal and CDR-3Xe external readers are among the

highest performance CD-ROM readers currently available. With average access times of 195ms and data transfer rates of 450Kb per second, these readers provide one of the fastest ways to access data from CD-ROM applications.

The MultiSpin series CD-ROM readers are fully compatible with High Sierra, ISO 9660 and Apple Macintosh HFS file formats, as well as a wide array of computer hardware platforms via NEC's optional flexible SCSI interface adaptor. Both drives are also XA-ready so that they may be used in future multimedia applications.

- ✓ Internally mounted 5-1/4" drive is SCSI-1 and SCSI-2 compatible
- ✓ Compatible with High Sierra, ISO 9660, MPC, Multisession Photo CD and Apple Macintosh HFS file formats
- ✓ Mode 2, Form 1 and Form 2 XA compatible
- ✓ 450Kb per second data transfer rate, 150Kb per second audio transfer rate, 195ms average access time
- ✓ Front panel LCD display with audio controls, headphone jack with volume control
- ✓ 256Kb cache memory improves overall throughput
- ✓ Includes 50 pin SCSI ribbon cable, "Y" power adaptor, CD-ROM cartridge and drive mounting rails

CDR-3XI 4 lbs	\$299.95
Internal version	
CDR-3XE 8 lbs	\$479.95
External version	
	\$949.00
Quad speed external version	

CD-AT160 2 lbs	\$149.95
16-bit SCSI interface card with software	
ACCESS 1 lb	\$19.95
Kodak Photo CD software*	

\*Note: Only available with the purchase of a CD-ROM drive

#### Connects to Your Sound Card!

#### CD-ROM Audio Cables

Connect your CD-ROM directly to your audio card with these interface cables. Each shielded cable matches your specific drive and sound card, making installation quick and easy. Simply replace DDD-SSS with the drive and sound card below.

CD-ROM	Series	Audio Card Series		
Manufacturer	DDD	Manufacturer	SSS	
Chinon	CHINON	Microsoft Sound	MS	
CM-205	CM	Pro Audio	PROA	
JDR/Mitsumi	MITSUMI	SoundBlaster	SBP	
NEC	NEC	SoundMan-16	SM16_	

Note: To order, use DDD-SSS, where DDD is replaced with the drive above, and SSS is replaced with the sound card above. Example: To connect a JDR CD-ROM to a SoundBlaster card, order part number MITSUMI-SBP

#### CD Jewel Case Use these cases to protect CD titles that did not include one. with the package. Ideal for organizing and protecting your data. 1 lb.

CD-Caddy

Spend less time shuffling the CD's in and out of your only caddy and reduce scratches or damaged data. 1 lb.

CD-CADDY .....

# Cables

#### Modular Adaptors



- Easy assembly
- Use economical modular phone cable instead of costly RS-232 cable
- Comes complete with wiring and hardware

GEN-09P-6	DB09P - RJ-11 (6P6C)	\$2.95
GEN-09P-8	DB09P - RJ-45 (8P8C)	\$3.49
GEN-09S-6	DB09S - RJ-11 (6P6C)	\$2.95
GEN-095-8	DB09S - RJ-45 (8P8C)	\$3.49
GEN-25P-6	DB25P - RJ-11 (6P6C)	\$2.95
GEN-25P-8	DB25P - RJ-45 (8P8C)	\$3.49
GEN-25S-6	DB25S - RJ-11 (6P6C)	\$2.95
GEN-25S-8	DB25S - RJ-45 (8P8C)	\$3.49
EXT-027	***************************************	\$4.95
Insertion/Extr	action tool for pins	

#### Tri-Port Serial Adaptor

Connects one modem to two PCs or two serial devices to one PC

✓ DB25 female, DB25 male and DB09 male connectors



... \$14.95



I always try to take the long range view, for myself and my purchases, and for you our potential customer. But please forgive me for waffling a bit regarding CD-ROM speeds. I will try to explain my reasons, even though I claim no special ability to predict the future

1X speed CD-ROMs with data transfer rates of 150Kb/s are more than adequate for program/data/ clipart distribution, many games, audio CD's and reference material like phone directories and encyclopedias.

2X CD-ROMs with 300Kb/s transfers are required to support most of multimedia titles. So, if everything was equal, it would seem that 3X with 450Kb/s transfers will be required to support future multimedia

In the not to distant future, MPEG2 will soon be implemented into single and two chip subsystems. When that happens, the data bottleneck will most likely be broken and 2X CD-ROMs will be adequate. P.S. — I'm using a NEC 2X CD-ROM in my system and find no fault with its performance. P.P.S. — Told you I was going to waffle

#### Null Modem Adaptor

Ideal for connecting PCs together via serial ports!

- Swaps all data and handshaking lines
- ✓ DB25 male to DB25 female

<b>GENDER-NM</b> DB25P-DB25S	1	lb		\$4.9
DB25P-DB25S	•	10	***************************************	, <i>,</i>

#### Serial Port Adaptor

Quality molded adaptors for 9-pin and 25-pin serial ports

✓ Connects 25-pin serial ports to 9-pin cables

✓ Molded construction

Complete with thumb screws and nuts

<b>GENDER-25-9</b> 1 lb DB09P-DB25S		\$4.95
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Keyboard Adaptors

The GENDER-5-6 connects your standard keyboard to a PS/2 computer. Use the GENDER-6-5 to attach a PS/2 compatible keyboard to a standard PC compatible. Consult your keyboard for compatibility.

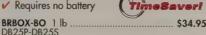
\$4.95

RS-232 Breakout **Box** 

With 24 switches and 12 line monitor LEDs, the RS-232 breakout box simplifies cabling tasks.

Ten bi-polar LEDs monitor TD, RD, RTS, CTS, DSR, CD, RC, DTR and TC signals

- 24 switches for breakout and patching
- Includes jumper wires
- Requires no battery



#### Gender Changers

Change the gender of cables and devices that use DB25 connectors.

- Connects to 25-pin standard D-SUB cable or device
- Molded construction

	GENDER-M-M	DB25P-DB25P	\$4.95
	GENDER-M-F	DB25P-DB25S	\$4.95
ŀ	GENDER-F-F	DB25S-DB25S	\$4.95
	GENDER-25-36	DB25S-CEN36P	\$9.95
	GENDER-36-25	DB25P-CEN36S	\$9.95
I	GENDER-25LB	DB25P	\$6.95
Į	Parallel port diagnosti	c loop-back connector	
ĺ	GENDER-H15-MM	HDB15P-HDB15P	\$4.95
ı	GENDER-H15-FF	HDB15S-HDB15S	\$4.95
ı	GENDER-VGA	DB09S-HDB15P	\$4.95
1	Connects 9-pin multisy	rnch monitor to	
ı	VGA display card		

#### Super-Thin Gender Changers

- ✓ Slotted hex mounting nut/screw installed
- High quality, sturdy construction, perfect for restricted space configurations

GEN-9MM	DB09 male/male	\$3.95
GEN-9FF	DB09 female/female	\$3.95
GEN-15MM	DB15 male/male	\$4.29
GEN-15FF	DB15 female/female	\$4.29
GEN-25MM	DB25 male/male	\$4.49
GEN-25FF	DB25 female/female	\$4.49
GEN-36MM	36-pin Centronics m/m	\$6.95
GEN-36FF	36-pin Centronics f/f	\$6.95
GEN-37MM	DB37 male/male	\$5.95
GEN-37FF	DB37 female/female	\$5.95

#### Deluxe Breakout Box

Displays all 25 lines on both the DTE and DCE side with two sets of LEDs. DIP switches enable all 25 lines, plus allow switching lines 2 and 3.



- ✓ 100 LEDs display all DTE and DCE signals
- 29 DIP switches open and close all connections and swap common lines such as pins 2 and 3
- Easy loopback and null modem tests
- ✓ Includes 12 jumper wires and vinyl carrying case
- ✓ Powered by standard 9V battery (not included)

#### Power Cables

Move your equipment without having to reach behind furniture and unplug from the wall socket. Use the CBL-PS-MNTR cable to

CBL-PS-MNTR

automatically apply power to your monitor when you switch your system power on! The European line cords enable travelers to plug their portable computers in foreign sockets.

LC-HP 1 lb	\$3.95
	\$4.95
LC-UK 1 lb	\$4.95
CBL-PS-MNTR 1 lb	\$3.95
CBL-HP-EXT 1 lb	\$3.95

Tech Tip

As the word suggests, a terminator is used to complete the end of a signal. Use a single ended SCSI terminator to prevent possibly misplacing the device. If you install a pass-through terminator in the wrong location, your SCSI devices may experience random errors which slow transfer rates. Even worse, your SCSI devices may not work at all!

#### Floppy Drive Cables

We stock floppy drive cables for many configurations. The universal drive cable is ideal for test and repair systems, where configurations frequently change. It includes both IDE34 and IDS34 connectors for each drive, so that you can easily plug in a 3-1/2" or 5-1/4" drive without searching for the appropriate adaptor.



Control Contro	
CBL-3.5-IDS 1 lb	95
CBL-FDC-IDE 1 lb	95
CBL-FDC-IDS 1 lb	
<b>CBL-FDC-3</b> 1 lb	.95
CBL-FDC-EXT 1 lb	95
CBL-DB37-MF 1 lb	95
<b>CBL-DB37-MM</b> 1 lb	.95

#### MFM/RLL Hard Drive

MFM/RLL drives require two cables plus power to each hard drive. When adding another hard drive, be sure you have a second data cable. If your control cable does not have a spare connector for the second drive, order the CBL-HD-34D. The longer cables are ideal for upgrades to upright cases.



CBL-HD-20 1 lb	\$2.95
CBL-HD-20L 1 lb	\$3.95
CBL-HD-34 1 lb	\$3.95
CBL-HD-34L 1 lb	\$4.95
CBL-HD-34D 1 lb	\$4.95 4

**Toll-Free FAX Ordering** 

#### 800-538-50

#### SCSI Terminator

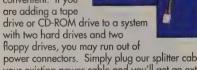
Tired of changing the termination jumpers in your SCSI chain? Simply add one of these handy external terminators to your SCSI drives, and at most you'll have to move it to another device!

SCSI-TERM 1 lb CEN50P connector	\$9.95
SCSI2-TERM 1 lbSCSI-2 terminator, HDB50P connector	. \$29.95



#### Miscellaneous Cables

We carry a variety of unusual drive cables to make your upgrade more convenient. If you



power connectors. Simply plug our splitter cable into your existing power cable and you'll get an extra power plug!

FDD-5Y 1 lb\$2.95 6" power splitter, 4-pin male to two 4-pin female
CBL-3.5 1 lb
CBL-IDE 1 lb\$4.95 20" cable for two hard drives, IDS40-IDS40-IDS40
<b>CBL-RCA</b> 1 lb
<b>CBL-MD4-MM</b> 1 lb

#### SCSI Device Cables

Trying to find an external SCSI-2 cable for your controller card? JDR carries a complete line of SCSI cables, including the hard-to-find SCSI-2 type with the high-density 50-pin connector. Our reliable cables are designed to provide long-lasting, positive connections to keep your data intact and secure.



CBL-SCSI2-CEN 2 lbs61 external, SCSI-2 HDB50P-CEI	<b>\$29.9</b> 5 N50P
CBL-SCS12-MM 2 lbs	\$29.95
CBL-SCSI-MM 2 lbs 6' external, CEN50P-CEN50P	\$19.95
CBL-SCSI-MM3 2 lbs	\$17.95
CBL-SCSI-MF 2 lbs	\$19.95

CBL-SCSI-MF3 2 lbs	\$17.95
CBL-DB25-SCSI 1 lb	\$12.95
CBL-SCSI-IDS 1 lb	\$4.95
CBL-SCSI-2 1 lb	\$6 <b>.</b> 95

#### Serial Cables

Reduce the number of converters and other in-line boxes in your existing application. For instance, our CBL-9-SERIAL connects to your system's 9-pin serial port and outputs to a 25-pin cable on the other side. Connect directly to a modem or other serial device without adding in-line 9 to 25-pin converters, null-modem adaptors, etc!



CBL-9-SERIAL 1 lb	5
<b>CBL-DB25-MF</b> 1 lb	5
<b>CBL-9-25</b> 1 lb	5
<b>CBL-DB25-MM</b> 1 lb	5
<b>CBL-MODEM</b> 1 lb	5
CBL-MSE-MODEM 1 lb	5
CBL-NULLMODEM 1 lb	5
CBL-MULTI-SER 1 lb	5

#### **Keyboard Cables**

Overstretching your existing keyboard cable can cause your motherboard connector or cable to fail. Add a keyboard extension cable to your system and you won't have to consider the problem! You can also place the keyboard further away from the keyboard, allowing you to better utilize your precious desk space!



CBL-KBD-EXT 1 lb	95
CBL-KBD-NON 1 lb\$4. Non-coiled 5' keyboard cable, DIN5P-DIN5S	95
CBL-KBD2-EXT 1 lb	95
CBL-KBD-MM 1 lb	95

24-Hour Toll-Free Ordering

800-538-5000

#### High-Quality, Extra Long Serial Cables

Locate a serial device up to 100 feet away! Use these serial cables to relocate a noisy printer or connect instruments in another room. Can also be used with appropriate software to transfer data between two computers, creating a low-cost LAN. 25-pin cables are generally used with modem and other data communications applications, 9-pin cables generally connect to other serial devices.



Part #	Connectors	Lines Wired	12'	25'	50'	100'
SER25-MF-xx	DB25P-DB25S	25 Lines	12.95	19.95	29.95	49.95
SER25-MM-xx	DB25P-DB25P	25 Lines	12.95	19.95	29.95	49.95
SER9-MF-xx	DB25P-DB25S	9 Lines	10.95	12.95	19.95	29.95
SER9-9-xx	DB25P-DB09S	9 Lines	9.95	12.95	19.95	29.95
SER9-9MF-xx	DB09P-DB09S	9 Lines	9.95	12.95	19.95	29.95

Note: To order, replace xx in part number with the desired length.

#### Printer Cables

Why stretch a cable to its limits and chance incorrect output? Choose the right cable for the job! If a cable is too short, add an extension or replace it with the right size! These cables can be used to connect a printer or extend an existing cable up to 25 feet. If you need a longer extension (up to 1,200 feet), see our signal extenders on page 43.



6' Centronics printer, DB25P-CEN36P	\$4.95
CBL-PRNTR-12 2 lbs	\$9.95
CBL-PRNTR-25 3 lbs	14.95
CBL-PRNTR-RA 1 lb	\$6.95
CBL-CNT-MM 1 lb	14.95
CBL-CNT-MF 1 lb	14.95

#### IEEE-488 Cable



Use our 3' shielded 24-pin cable to connect instrumentation to your IEEE-488 interface card. It can also be used to interconnect IEEE-488 instruments. The unique combination male/female connector at each end of the cable allows several cables to be stack-connected, permitting star and daisy-chain configurations. This high-speed parallel interface controls up to 14 devices at rates up to 1 megabyte per second.

CBL-IEEE-488 2 lbs ......\$39.95

#### Heavy-Duty Velcro Cable Ties



These heavy-duty cable ties are an ideal way of keeping cables neat! The velcro fastener allows the cable tie to be used over and over, making it ideal for frequently accessed cable bundles. It is also ideal for keeping rolled up network and extension cables neat and tidy when not in use.

#### **Monitor Cables**

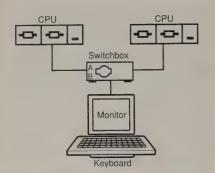
These cables extend your monitor's cable, allowing you to place your system out of the way! Most VGA and Super VGA monitors use a high-density 15-pin connector. Plug the CBL-MNT-15 in-line with your existing cable, and place your system 6 feet further away! The male to male cables connect your equipment to switchboxes.



CBL-MNT-15 1 lb
<b>CBL-HDB15-MM</b> 1 lb
CBL-MNT-9 1 lb\$4.95 6' EGA/CGA/HGA extension, DB09P-DB09S
CBL-DB09-MM 1 lb
CBL-VGA 1 lb

#### Keyboard/Monitor Switchboxes

If you have two systems, can you type on both at the same time? If you need more desktop space, or you just don't want to buy two monitors and keyboards, these switchboxes may be just the answer! Just attach one monitor, keyboard and two systems and you'll save space, money and energy!





#### Serial Switchboxes

DCC O	0 11	DROSS I. O. DROSS	\$9.95
K55-Z	Z 105	DB25S to 2 x DB25S	
RSS-3	2 lbs	DB25S to 3 x DB25S	\$14.95
RSS-4	3 lbs	DB25S to 4 x DB25S	\$19.95
RSS-5	3 lbs	DB25S to 5 x DB25S	\$29.95
RSS-X	3 lbs	Crossover 2 x DB25S to 2 x DB25S	\$19.95
RS9-2	2 lbs	DB09S to 2 x DB09S	\$9.95
RS9-4	2 lbs	DB09S to 4 x DB09S	\$14.95



RSK15-2WA 2 lbs	29.95
RSK9-2WA 2 lbs	\$29.95
RSK15-2 2 lbs	\$24.95
RSK9-2 2 lbs	\$19.95

#### Parallel Switchboxes

RSP-2 2 lbs	CEN36S to 2 x CEN36S	\$9.95
RSP-3 2 lbs	CEN36S to 3 x CEN36S	\$14.95
RSP-4 3 lbs	CEN36S to 4 x CEN36S	\$19.95
RSP-5 3 lbs	CEN36S to 5 x CEN36S	\$29.95
RSP-X 3 lbs	Crossover 2 x CEN36S	\$19.95

#### Miscellaneous Switchboxes

RSJ6-2 2 lbs	RJ11 to 2 x RJ11	\$14.95
<b>RSJ6-4</b> 3 lbs	RJ11 to 4 x RJ11	\$18.95
RSJ6-X 2 lbs	Crossover 2 x RJ11 to 2 x RJ11	\$14.95
<b>RSJ8-2</b> 2 lbs	RJ45 to 2 x RJ45	\$14.95
<b>RSJ8-4</b> 3 lbs	RJ45 to 4 x RJ45	\$18.95
RSCX-2 2 lbs	Female BNC to 2 x Female BNC	\$29.95

#### Universal Serial/Parallel Converter

This serial/parallel converter can be used for serial to parallel or parallel to serial conversions. It converts standard RS-232 signals to Centronics parallel format or vice versa.



- ✓ Converts Centronics parallel to/from RS-232C serial
- ✓ 64 byte buffer; 110 to 57,600 bps in serial mode
- ✓ Hardware handshake RTS/CTS, software handshake XON/XOFF
- ✓ Features DTE/DCE switch selectable mode
- Power, status, parallel and serial busy LED indicators; 7-bit odd parity or 8-bit no parity word lengths
- ✓ Female DB25 and female CEN36 connectors
- ✓ Includes AC adaptor and manual

CV-UNIV 2 lbs ......\$69.95

#### 256Kb Printer Buffer

This printer buffer reduces the time you wait for printer output. Your computer can send data at full speed to the buffer, and the buffer holds the data in memory until the printer is ready for it! This intelligent buffer lets two computers talk to one printer. Alternately, one computer can also be connected to two printers. A front-panel copy switch makes multiple copies easy.



- ✓ Centronics parallel interface compatible
- ✓ 256Kb buffer size
- ✓ 3 Centronics 36-pin female connectors on rear panel
- Memory usage, port selection, copy mode and error LEDs on front panel
- Front-panel copy feature prevents tying up computer for long periods of time; reset switch terminates current documents. Auto formfeed capability prevents 2 documents on 1 page
- ✓ Includes 110VAC adaptor and manual

UFP-21	4 lbs	\$199.95	
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#### Automatic Printer Switches

These printer sharing switches enable up to 4 computers to connect to 1 printer. Each computer is monitored and switched on demand. When one computer is connected to the printer, the others see printer-in-busy state and wait for their turn.



- ✓ Centronics parallel interface compatible
- ✓ Adjustable from 6 to 110 seconds time out
- ✓ 4 DB25S inputs and 1 DB25S output connectors
- ✓ Variable time-out and automatic formfeed insertion features
- ✓ Front-panel printer status LEDs
- ✓ Includes instruction manual

ASP-401	5 lbs	. \$49.95
ASP-801	8 input version, 7 lbs	. \$99.95
ASBP-81	8 lbs	\$299.95
8 input ve	ersion with 256Kb buffer	

#### Automatic Printer Switch

This parallel printer switch automatically connects one of two computers to your printer. No one has to reach for the switchbox and change the dial to get a printout! If the other computer is currently using the printer, your system simply waits for its turn.



- ✓ Centronics parallel interface compatible
- ✓ Hardware set to 6 second time out
- ✓ Two DB25S input and one DB25S output connectors
- ✓ Two LEDs indicate current connection status

ATSW-2P	2 lbs	\$19.95
ATSW-4P	2 lbs	\$34.95
4-port vers	sion of above	

# For Previous Owners of JDR Printer Extenders



Designed for use in printer sharing networks that already use the CXPT-4/CXPR-4 series modules, these extenders allow up to 16 computers to share one printer. Simply add more transmitters to your network to provide access to other users. The transmitters automatically switch on and off to allow multiple users access to the printer. Each transmitter has its own time-out setting for greater flexibility.

- ✓ Centronics parallel interface
- Maximum cable distance is 1,200 feet
- ✓ Transfers up to 6,000 characters per second
- ✓ Time-out adjustable to 5, 15 or 30 seconds
- Transmitter includes DB25P parallel port connector and two RJ11 modular cable connectors
- Receiver includes CEN36P parallel port connector and one RJ11 modular cable connector
- Includes 25-foot modular cable and instructions

Note: Not compatible with CEXT or CEXR series printer extenders

#### LAN Printing Without a Workstation!

#### Netport Express Print Servers

Add printers to your Novell NetWare LAN without using a computer. These modules plug into your 10Base2 or 10BaseT network and directly connect to your printer. The result is remote printing capability without burdening a computer system.

- 10Base2 and 10BaseT interfaces support 802.2, 802.3, Type II and SNAP frame types
- ✓ Supports Novell NetWare 2.15c or above, 3.x and 4.x
- XL throughput up to 180Kb per second, EL throughput up to 80Kb per second
- ✓ Two DB25S Centronics compatible parallel ports, XL also has one DB09P serial port
- Dedicated print server without VAP, NLM or EXE on file server
- Complete with NP Manager for Windows to monitor and control servers from any PC on the network

PCLA2141 3 lbs NetportExpress EL Print Server	\$399.95
PCLA2131 3 lbs XL version adds 1 serial port & up to 180Kb/ throughput	<b>\$449.95</b> sec

#### Share Your Laser Printer with Others

#### Connect 16 PC's to 1 Printer!

Why buy each user a separate laser printer or invest in a network when this simple printer extender will save you money? Simply plug one transmitter in each of up to 16 PC compatible parallel printer ports. Then daisy-chain the supplied straight-through modular cable and connect a receiver to the printer.

Based on a first-come, first-served priority, the transmitters automatically switch on and off to allow multiple users access to the printer. Each transmitter has its own time-out setting for greater flexibility.

- Compatible with Centronics parallel printer interfaces
- Extends printer up to 1,250 feet away from computer
- ✓ Transfers up to 11,000 characters per second
- Time-out independently adjustable on each transmitter to 5, 15 or 30 seconds
- ✓ Includes 25 foot straight-through modular cable and instructions



 Transmitter includes DB25P and 2 female RJ11 connectors; receiver includes CEN36P and 2 female RJ11 connectors

CEXT Transmitter for PC, 1 lb	\$49.95
CEXR Receiver for printer, 1 lb	\$49.95
HT-2037 Modular plug tool kit, 1 lb	\$18.95
Includes RJ11 crimper with 50 pcs 6P4C module	

Note: Not compatible with CXPT-4 and CXPR-4 series printer extenders.

#### Extend Up To 1,200 Feet Away!

#### Parallel Printer Extender

This extender makes it possible to locate your parallel printer up to 1,200 feet from your computer! Simply plug the transmitter in your computer, plug the receiver in your printer, and join the two with straight-thru modular phone cables. There are no jumpers to set and no software to configure, so installation is fast and easy!

- Centronics parallel interface compatible
- ✓ Maximizes distance 1,200 feet
- Speeds up to 6,000 characters per second
- ✓ Works with as few as two wires
- ✓ Transmitter has DB25P connector; receiver has CEN36P for standard PC applications. RJ11 6P4C modular connectors
- ✓ Includes transmitter, receiver and 50 feet of straight through modular cable



CXP-2 3 lbs	\$69.95
HT-2037 Modular plug tool kit, 1 lb	\$18.95
module pluas	

#### Network Print Share

This modular printer sharing network connects up to 28 PC compatibles and up to 4 printers/plotters together, plus you can intermix serial and parallel types! Mix and match to connect your serial plotter through your computer's parallel printer port. Easy-to-use DOS and Windows utilities give you complete control of the network. A convenient front panel switch on each transmitter lets you select the output device and indicates status.

- PC compatible adaptors connect to serial or parallel interfaces
- Up to 4 printers and 28 PC compatible computers on 1 network
- ✓ Network data transfer rate up to 38,400 baud
- Kit includes two 20' 6-conductor RJ11 straightthrough cables and two 3' DB25P-DB25P printer cables



PS5132PT 1 lb\$69.99 Single transmitter for PC parallel port with cables	5
PS5132ST 1 lb	5
PS5132PR 1 lb	5
PS5132SR 1 lb	>

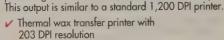
# Printers

#### Thermal Wax Technology

#### Low-Cost Color Printer!

For dynamic, attention-getting presentations, thermal wax transfer technology surpasses dot matrix and ink jet printers by producing brighter, more vibrant colors. And when your output coverage is high, this inexpensive thermal wax printer is more cost-effective than an inkjet printer. Since the color is thermally applied, there is no drying time, which eliminates wrinkling and smearing.

Add the Photo-Realistic Upgrade Kit to convert the printer to a hybrid dye-sublimation printer. This kit changes the print engine so that it deposits the color in the paper fiber, rather than simply applying it to the surface. Each dot of color blends into adjacent d producing continuous tones, rather than dithered pixels.



- ✓ Dithers up to 262,144 colors
- ✓ 50 sheet input tray accepts letter or legal size paper
- ✓ Print speed approximately 2.5 minutes per page
- ✓ Includes drivers for Windows 3.1
- ✓ Centronics compatible parallel interface
- √ 120VAC, 50/60 Hz input
- √ 5-3/4"H x 13-3/4"W x 17-3/4"D



lots, FREGO	
PRIMERA 18 lbs	
PRIMERA-PRU 5 lbs	<b>\$249.95</b> r to hybrid
PRIMERA-R1C 2 lbs	\$39.95
PRIMERA-R3C 2 lbs	. \$44.95
PRIMERA-R4C 2 lbs	\$44.95
PRIMERA-PAPER 2 lbs	\$14.95
PRIMERA-FILM 2 lbs	\$34.95



Includes Panasonic 2-Year Warranty!

#### Versatile Panasonic Dot Matrix Printers

JDR is your source for award-winning Panasonic Dot Matrix Printers at great prices. Each is engineered for versatility, super-quiet performance, user-friendly operation and years of reliability backed by a 2-year warranty. Choose from 8 models:

KX-P1150 9-pin, 7 fonts, wide carriage, up to 240 CPS in draft/38 in NLQ, 4K buffer expandable to 36K. KX-P1150 13 lbs .......\$149.95

KX-P2023 24-pin, 7 fonts, narrow carriage, up to 240 CPS in draft/80 in NLQ, 14K buffer expandable to 46K. KX-P2023 14 lbs ......\$199.95

**KX-P2130** 24-pin, 10 fonts, narrow carriage, up to 250 CPS in draft/83 in NLQ, 14K buffer expandable to 46K, Energy Star compliant.

KX-P2130 35 lbs ......\$239.95

**KX-P3123** 24-pin, 10 fonts, narrow carriage, up to 240 CPS in draft/80 in LQ/32 in SLQ, 46K buffer. KX-P3123 22 lbs ......\$249.95

**KX-P3124** 24-pin, 12 fonts, 10" carriage, up to 320 CPS in draft/106 in LQ/42 in SLQ, 52K buffer. KX-P3124 24 lbs ......\$329.95

**KX-P3624** 24-pin, 12 fonts, wide carriage, up to 300 CPS in draft/100 in LQ/40 in SLQ, 58K buffer. KX-P3624 40 lbs ......\$399.95

#### Panasonic Printer Options

Replace your worn out ribbon with a genuine Panasonic printer ribbon! Your output will look better and your printhead will thank you too!

<b>KX-P115</b>	12.95
KX-P145	12.95

<b>KX-P150</b> \$12.95 Black ribbon for KX-P2123, P2124, P2180 & P3124
<b>KX-P150C</b> \$24.95 Color ribbon for KX-P2123, P2124, P2180 & P3124
PCK11 \$69.95 Color kit for KX-P2123, P2124, P2180 & P3124
<b>KX-P155</b> \$12.95 Black ribbon for KX-P1624, P1654, P2624 & P3624

#### Other Enson Printers

orner Spoots I	
<i>LQ-1170</i> 24-pin, wide carriage, up to 413 CPS <i>LQ-1170</i> 31 lbs	\$589.00
<i>LQ-870</i> 24-pin, narrow carriage, up to 413 CPS <i>LQ-870</i> 23 lbs	. \$429.95
FX-870 9-pin, narrow carriage, up to 290 CPS FX-870 20 lbs	. \$269.95
FX-1170 9-pin, wide carriage, up to 290 CPS FX-1170 27 lbs	. \$359.95
LQ-2550 Color 24-pin, wide carriage, up to 400 C	CPS

#### Avery Laser Printer Labels

Part #	Size	Labels/Sheets	Price
AVERY-5160	1"H x 2-5/8"W	30/100	\$29.95
AVERY-5161	1"H x 4"W	20/100	\$29.95
AVERY-5162	1-1/3"H x 4"W	14/100	\$29.95
AVERY-5260	1"H x 2-5/8"W	30/25	\$9.95
AVERY-5262	1-1/3"H x 4"W	14/25	\$9.95
AVERY-5660	1"H x 2-5/8"W*	30/50	\$39.95
AVERY-5196	3-1/2"sq. floppy	09/70	\$39.95
AVERY-5197	5-1/4"sq. floppy	12/70	\$39.95

\*Note: Clear labels



volume and ignore just about everything else.

Our readers probably can't understand that statement without a little explanation. My enthusiasm for and interest in topics related to PC's makes it difficult for me to temper my advice regarding most of the products we and others offer up for sale.

I want everybody to own the fastest, highest capacity, feature-rich PC available. Worse yet, I want to recommend the PC that won't be available for about 3 months. But I have to be practical and that means I have to balance price with performance when I recommend. Back to the topic, here's the way I see it. If you are a volume purchaser of toner cartridges, you can probably afford slightly increased printer maintenance costs, and have the resources required to choose a reliable vendor for refilled cartridges. Your participation in that market will even have a valuable effect

participation in that market will even have a valuable effect on the environment through reduced waste.

On the other hand, if you are an end user or low volume user of toner cartridges, you probably lack the buying power, ability to compare, and sheer clout that may be required if you get a dud from a cartridge remanufacturer. I advise you to stick with the name brand and the security it offers.

For me, this was an easy choice! I have yet to go through two cartridges in one year, so I stick with the manufacture's offering and spend a few extra dollars.

## 720 DPI Inkjet Printer! Stylus Color Printer

Now your reports

will grab the reader's attention, thanks to the high-resolution output of Epson's Stylus Color inkjet printer! Your graphs, charts and photos will make your documents stand out. Your office-associates will appreciate the whisper-quiet inkjet operation, and since the printer is Energy Star compliant, you'll use less power!

- ✓ Full-color 720 x 720 DPI maximum resolution ink jet color output
- ✓ Quiet 47 dBa operation reduces disturbances
- ✓ 7 resident fonts, 4 are scalable and monochrome
- ✓ Centronics compatible parallel interface
- ✓ 100 sheet paper tray reduces paper-feeding.
- ✓ EPA Energy Star Compliant to save power

STYLUS-C	OLOR 20 lbs	\$569.00
5020034	Black ink cartridge	. \$14.95
	Color ink cartridge	
S041029	200 sheets of 720 DPI paper	\$21.95

#### Action Laser 1500

This low cost personal laser printer includes advanced printing capabilities that demanding users require. This printer delivers crisp, sharp images for professional looking presentations, newsletters and other documents. MicroArt printing makes your blacks dark and richer while RITech print technology reduces jagged curved images.

- ✓ 300 x 300 DPI resolution with MicroArt printing and RITech technology
- ✓ 6 page per minute print speed using a Minolta engine
- ✓ 14 resident bitmap fonts and 13 scalable fonts
- ✓ LaserJet III and Epson dot matrix compatible
- ✓ 1Mb memory expandable to 5Mb on main board
- ✓ Versatile 150 sheet input tray



#### Toll-Free Technical Support

800-538-5002

#### Stylus 800+ Inkjet

This compact, quiet, personal printer rivals laser printer output using plain paper, and it costs about half the price! Instead of using the noisy impact mechanism in dot matrix printers, the Stylus 800 sprays ink on the paper. The result is higher resolution, reduced noise and greater versatility. Seven built-in fonts are included, and it's TrueType font compatible.

- 360 x 360 DPI maximum resolution for lasersharp results
- ✓ Whisper-quiet operation (45 dBa) reduces disturbances
- ✓ Print speed up to 198 CPS at 12 CPI NLQ



- ✓ Centronics compatible parallel interface
- ✓ Includes Epson's 2-year limited warranty

<b>STYLUS-800+</b> 15 lbs	\$249.95
STYLUS-400 15 lbs	\$199.95
Low-cost version prints up to 144 CPS @ 120	CPI NLQ

#### **HP Printer Accessories**

Don't compromise the quality of your HP printer's output! Use genuine, new HP replacement cartridges. They are designed to provide the sharpest, cleanest output on a variety of media.

#### Inkjet Cartridges

Black cartridge for DeskJet and DeskWriter 500 series	327.73
HP-51625A 1 lb	\$29.95
HP-51640A 1 lb Black cartridge for DeskJet 1200	\$29.95
HP-51640C 1 lb Cyan cartridge for DeskJet 1200	\$29.95
HP-51640M 1 lb	\$29.95
HP-51640Y 1 lb Yellow cartridge for DeskJet 1200	\$29.95

#### Inkjet Media

8-1/2" x 11" film, 50 sheets

HP-51630Y 3 lbs	\$19.95
8-1/2" x 11" paper, 200 sheets	
HP-51636H 2 lbs	\$59.95
8-1/2" x 11" glossy paper, 50 sheets	,
UD-51434E 2 lb.	\$40.0E





#### Toner Cartridges

HP-92295A 3 lbs For HP LaserJet II & III	\$99.95
HP-92275A 2 lbs For HP LaserJet IIP & IIIP	\$89.95
HP-92291A 2 lbs	\$149.95
HP-92298A 2 lbs For HP LaserJet 4	\$129.95
HP-92274A 2 lbs For HP LaserJet 4L & 4ML	\$79.95

#### PARANA Black Ribbons

\$051016 Imaging cartridge, 3 lbs ...... \$169.95

AL-1100 300 DPI, 4 PPM, 30 lbs ...... \$489.95

For Epson Action Printer 2000, FX-70, FX-80, FX-85, FX-86-e, FX-850, LX-810, MX-70, MX-80, MX-85, MX-90, RX-70 and RX-80, plus IBM 5152 and 5153.

PARANA-201S 2 lbs .......\$5.95

For Epson LQ-200, LQ-500, LQ-510, LQ-570, LQ-800, LQ-850 and LQ-870.

For Panasonic KX series P1000, P1080, P1080AP, P1080i, P1081, P1082, P1083, P1090, P1091, P1091i, P1092, P1092i, P1180, P1191, P1592, P1593, P1595.

PARANA-3815 2 lbs ......\$6.95

#### EPSON LQ-570+ Printer

The Epson 24-pin LQ-570+ includes the enhanced ESC/P 2 printer control language that eliminates bitmap downloads for quick printing of various sized letter-quality fonts. This low-priced printer features a fast print speed, enhanced graphics capabilities and four convenient paper paths, making it ideal for home and business applications.



- Roman and Sans Serif fonts are scalable, 8 to 32 points
- Four paper paths; front, rear, top and bottom
- ✓ Fast print speeds up to 315 CPS
- ✓ Centronics compatible parallel interface
- ✓ 360 x 360 DPI maximum resolution
- ✓ Includes Epson's 2-year warranty

	LQ-1070 23 lbs LQ-1170+ wide-carriage version of above	
I	LX-300 12 lbs Low-cost 9-pin printer, up to 264 CPS	\$169.95

# Software



#### After Dark Screen Saver

Prevents images from burning into your monitor. Use with Multimedia compatible sound card to produce audio effects too! Includes over 40 screen saving displays and a password-based security system.

#### AutoSketch

Combines the power and precision of Computer Aided Drafting (CAD) with ease of use of a natural drawing interface. Use to develop conceptual mechanical, electrical, architectural and technical illustrations for desktop publishing and more.





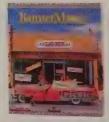
#### Calendar Creator Plus

Create separate calendars for members of your project and then combine calendars for a master calendar. Supports recurring appointments, daily, weekly, monthly and other formats, plus supports color for eyecatching highlights.

#### Carbon Copy

Access your office from your home or while you're on the road. You can remotely control applications, files and peripherals of other PC's with full graphics support. Allows you to quickly transfer files and access BBS's too!





#### BannerMania

Create spectacular banners and signs (even bumper stickers) using 20 special effects, 27 eye-catching shapes, 19 fonts, smooth shapes and 40 ready-to-use designs for birthdays and holidays.

386-to-the-Max Memory Manager	
386-MAX DOS, 3-1/2" disks, 2 lbs	\$69.95
5,050 Clipart Images CD-CLIPART DOS, CD, 1 lb	. \$19.95
640Mb Shareware Studio CD-SHARE2 Volume 2, DOS, CD, 1 lb	\$29.95
CD-SHARE2 Volume 2, DOS, CD, 1 lb	\$29.95 \$29.95
ACCPAC BPI Accounting	\$27.73
BPI DOS, 5-1/4" disks, 9 lbs	\$159.95
ACCPAC Simply Accounting SIMPLY-ACCT-W Win, 3-1/2" disks, 4 lbs SIMPLY-ACCT 3 lbs DOS, 5-1/4" & 3-1/2" disks	\$89.95 \$89.95
ACT! Contact Manager ACT DOS, 3-1/2" disks, 4 lbsACT-W Win, 3-1/2" disks, 5 lbs	
Actor for Windows Programming S ACTOR-W 6 lbs	<i>\$169.95</i>
Adobe Illustrator ILLUSTRATOR-W Win, 3-1/2" disks, 8 lbs	\$459.95
Adobe Type Manager TYPE-MANAGER Win, 3-1/2" disks, 2 lbs	\$59.95
Afterdark Screen Saver AFTERDARK-W Win, 3-1/2" disks, 1 lb AD-DISNEY 1 lb	\$29.95 \$29.95
AD-DISNEY 1 lb Disney version, Win, 3-1/2" disks AD-STARTREK 1 lb Star Trek, Win, 3-1/2" disks CD-AD CD ver w/80 screens, Win, CD, 1 lb.	\$29.95
Aircraft Encyclopedia CD-AIR DOS, CD, 1 lb	
American Civil War CD-CIVIL DOS, CD, 1 lb	\$39.95
American Presidents CD-PRES DOS, CD, 1 lb	\$39.95
AMI Diagnostic Software AMI-DIAG DOS, 5-1/4" disks, 2 lbs	\$89.95
AMI Professional AMIPRO Win, 3-1/2" disks, 5 lbs	\$279.95
Anyview Desktop Editor ANYVIEW Win, 3-1/2" disks, 2 lbs	\$49.95
Approach Database APPROACH-W Win, 3-1/2" disks, 4 lbs	\$99.95
Audobon's Birds of America CD-BIRDS Win, CD, 1 lb	\$29.95
Auto Menu Software AUTO-MENU 2 lbs. DOS, 5-1/4" & 3-1/2" disks	\$39.95
AutoCAD LT AUTOCAD-LT-W Win, 3-1/2" disks, 4 lbs	. \$449.95
Automap Street Atlas AUTOMAP DOS, 3-1/2" disks, 2 lbs	\$69.95
Autosketch AUTOSKETCH-3 DOS, 3-1/2" disks, 4 lbs AUTOSKETCH DOS, 5-1/4" disks, 4 lbs	\$99.95 \$99.95
BANNERMANIA 2 lbs	\$19.95

	***************************************
BarOne Bar Code Printing Softwar BAR-ONE DOS, 3-1/2" disks, 2 lbs BAR-ONE-W Win, 3-1/2" disks, 2 lbs	re \$59.95 \$59.95
BarOne Professional BAR-ONE-PRO DOS, 3-1/2" disks, 2 lbs BAR-ONE-PROW Win, 3-1/2" disks, 2 lbs	\$249.95 \$269.95
Battle Chess CD-CHESS-B DOS, CD, 1 lb	\$49.95
Bible Library CD-BIBLE DOS, CD, 1 lb	\$29.95
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#### CheckIt PC Diagnostic Utility

Use to determine hardware and software configuration, make sure your system is working properly and run benchmarks to show actual throughput of your machine.

Displays EMS, XMS and TSR memory maps, identifies modem, network, CD-ROM interfaces and much more.



#### CO/Session

This remote computer access software allows you to run one computer from your computer via modem. Your screen will look just like the system's you're operating! Supports Windows, highspeed file transfers and access to BBS's.



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#### Software



#### DrivePro

DrivePro makes hard disk installation simple. It automatically sets up your CMOS, low-level formats appropriate drives, then partitions and DOS formats. Breaks DOS' 528Mb limit and allows up to 2Gb in one partition!



#### Microsoft Encarta

This complete electronic encyclopedia combines sights, sounds and facts into an interesting and informative multimedia presentation. The CD-ROM combines diagrams and photos with interactive videos and animations. Eight full hours of sound, including the national anthems of 181 countries are included.



#### EZ Route Schematic Capture & Layout

This affordable schematic capture system includes PC board design and layout facilities for maximum efficiency. It checks for design errors, produces lists of parts, nets, pins and more. In addition, since you won't spend so much time erasing and fixing holes in your paper, you can reduce development time!

#### LapLink for Windows

This new Windows version provides simple, reliable remote control and file transfer capabilities. Transfer data between two computers using the included serial or parallel cables, via your modem or a Novell network. The data synchronizing feature automatically determines which files need to be updated on either system.



#### MaxIDEA -Maximum IDE Acceleration

This hard disk device driver accelerates IDE performance by enabling the Read Multiple and Write Multiple commands. Compatible IDE hard drives will transfer data more efficiently, providing up to an 80% improvement!

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#### Hilaak

This graphics conversion and capture utility converts vector, raster and fax graphics, PostScript EPS/AI and ASCII text files through drop-down menus. Includes screen and printer capture software for production environments.



#### Microsoft Windows 3.11

This graphical user interface for PC compatible systems features multimedia compatibility, adding sound, MIDI and CD-ROM capability. TrueType fonts produce true on-screen images of printed fonts without requiring installed matching screen fonts. Enhanced code protects users from frequent "Unknown Application Errors" (UAEs), improves network interfacing and increases system performance.



#### Lotus 1-2-3 for DOS

Lotus' latest version features a goal-seeking backsolver, WYSIWYG formatting and allows you to sum multiple columns and rows simultaneously. SmartIcons provide oneclick shortcuts to common spreadsheet tasks.

#### LogicLab Explorer

The LogicLab Explorer transforms your PC into a complete environment for "building", testing and simulating digital logic circuits. By giving you the simulated equivalent of a parts cabinet, a wire-wrap board and a logic analyzer, you can develop and test circuits without spending additional money.



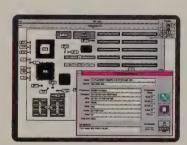
#### Spanish Assistant

This Spanish translator converts English to Spanish and vice versa. Automatically conjugates over 2,000 verbs and includes a suite of tools to help write, translate and study the Spanish language.



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#### Micro House Technical Library

Complete configurations, diagrams, settings, component locations, and vital information on over 1,500 motherboards, 700 network interface cards and 2,200 hard drives. A graphical presentation shows component positions and more.

#### Software



#### OA Plus

This PC compatible diagnostics program is designed to be used by novice and technical operators. Comprehensively tests CPU, co-processor, video, hard and floppy drives, serial and parallel ports, interrupt and DMA controllers, etc. Useful in determining interrupt and port-assignment conflicts.

#### Remind Me!

Keep your "Looney" to-do list organized and make it fun too! Looney Tunes characters such as Bugs, Daffy and Taz remind you of meetings, help you plan future events and even open files! Powerful menus allow you to set up recurring events for increased productivity. Includes animated screens and sounds from your favorite characters.





#### Presentation Task Force

This clipart library includes over 3,500 CGM graphics. Spice up your presentations with an appropriate illustration. It includes arrows and borders, backgrounds, flags and maps, people, hands, symbols, cartoons and more.



It's almost scary the way the future sneaks up when we aren't looking. Using our computers for conferencing and sharing pictures and data in real time seems like a thing for the future. Even though some of the on-line BBS services transmit both pictures and data, most of us didn't expect two way interactivity for a few more years.

Then along comes Intel and their ProShare
Personal Conferencing Software. In a quiet move that
changes the way we look at our machines, Intel made
sharing data on the desktop so easy it makes you
wonder why it took so long

wonder why it took so long.

Using Windows and a 386 or faster computer with either a network or 9600 bps and faster modem, you can effectively share graphics and text data with an associate, and share the data for on-screen real time updating or annotation.

If you choose OLE (Object Linking and Embedding), documents are updated in a way that make the phrase "living document" true in ways that never existed before.

I strongly recommend this "tool" for your consideration. Like any tool, it is designed for a specific range of problems, but this one is more like a hammer than a keyhole saw. I think many of us will find it useful in any number of situations.

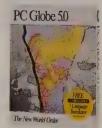
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SIDEWAYS 2 lbs	75
Significant Series Shareware CD-SIGSERIES Win, CD, 1 lb	95
SimEarth Simulation Game SIMEARTH-W Win, 3-1/2" disks, 3 lbs \$34.9 SIMEARTH DOS, 3-1/2" disks, 3 lbs \$34.9	95 95
Simply Accounting	
SIMPLY-ACCT-W Win, 3-1/2" disks, 4 lbs\$89.5 SIMPLY-ACCT 3 lbs\$89.5 DOS, 5-1/4" & 3-1/2" disks	)5
Simtel20 MS-DOS CD-ROM CD-SIMTEL20 DOS, CD, 1 lb\$19.5	25
SoundWAV II CD-SOUNDWAV2 Win, CD, 1 lb\$19.9	25
Sourcer Disassembler Utility	
<b>SOURCER</b> DOS, <i>5</i> -1/4" disks, 2 lbs	)5 )5
Software Toolworks Reference Library CD-REFLIB DOS, CD, 1 lb \$49.5	25
Space and Astronomy CD-SPACE DOS, CD, 1 lb	25
Spanish Assistant SPAN-ASSIST Win, 3-1/2" disks, 2 lbs	25
Stacker Compression Software	
STACKER-U 2 lbs         \$49.9           Version upgrade, DOS, 3-1/2" disks         \$71/2" disks           STACKER DOS, 3-1/2" disks, 3 lbs         \$99.9	5
Star Trek Screen Saver AD-STARTREK Win, 3-1/2" disks, 1 lb\$29.9	5
Super Munchers Trivia Game MUNCHERS 3 lbs \$29.9 DOS, 5-1/4" & 3-1/2" disks	5
SelectPhone Telephone Directory CD-SELECT DOS, CD, 2 lbs	
CD-SELECT DOS, CD, 2 lbs \$199.9 CD-DIRECT 2 lbs \$99.9 Limited search version, DOS, CD	5
The Korean War CD-KOREA DOS, CD, 3 lbs	5
The Oregon Trail Simulation OREGON-TRAIL DOS, 5-1/4" disks, 1 lb\$39.9	
The Plant Doctor CD-PLANTDOC DOS, CD, 1 lb	5
Timeline Project Management TIMELINE-W Win, 3-1/2" disks, 3 lbs	5
Timeslips TIMESLIPS DOS, 3-1/2" disks, 4 lbs	
Truetype Fonts TRUETYPE1-W 2 lbs\$49.9	5
TRUETYPE1-W 2 lbs       \$49.9         Pack 1, Win, 5-1/4" & 3-1/2" disks         TRUETYPE2-W 2 lbs       \$49.9         Pack 2, Win, 5-1/4" & 3-1/2" disks	5
Turbo C++ TURBO-C++ 5 lbs	5
Visual C++ VISUAL-C++W Win, 3-1/2" disks, 8 lbs\$79.9	

#### PC Globe

A solution to your outdated atlas! This up-todate electronic reference contains detailed world and regional maps. It also includes current data on 208 countries, ranging from demographics and economics to health statistics and education.



#### SimEarth for Windows

Simulate a living planet from its birth to its death. By controlling the atmosphere, biosphere, civilizations, meteors, volcanos and more you guide life from its inception as single-celled microbes to a civilization that can reach for the stars.



# PROCONING Andrew Causeming on Company Andre

#### **ProComm Plus for Windows**

This popular, powerful communications software now features fully-integrated send and receive fax support. It supports automatic fax and data call discrimination, allowing ProComm for Windows to automatically switch to fax or data mode, based on the incoming call. Distinctive Ring and Caller ID are also supported for fax/modems and service areas that support these functions. Emulates 34 popular terminal types and even includes an automated dialing directory.

#### SpeedStor Installation & Diagnostics

Combines superior partitioning enhancements and thorough diagnostic testing. Reformat feature allows you to change the drive interleave while leaving your data intact, making the operation quicker. Supports IDE, MFM, RLL, ESDI and SCSI hard drive formats.



#### ACCPAC Simply Accounting

This entry-level accounting package features an easy-to-learn, consistent menu structure, automatic transaction posting and more. Supports accrual and cash basis accounting methods and includes password security to protect your data.



A Comment

#### Toll-Free FAX Ordering

800-538-5005

#### Quicken

Easy-to-use and powerful financial program that's ideal for both business and personal use. Reporting options include P&L's, cash flow and balance sheets.

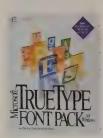
Works like your paper checkbook, so you'll know what to do right away!



24-Hour Toll-Free Ordering

800-538-5000

#### Software



### Microsoft TrueType Font Packs

Add 44 scalable TrueType fonts to your Windows 3.1 from the Lucida and Monotype sets. You'll see the same font on the screen and printer. Compatible with HP LaserJet and PostScript compatible printers.



#### Wildcat BBS Software

This professional Bulletin Board System software allows you to route files to anyone electronically, take orders, provide message pick-up and delivery, poll caller opinions, provide around-the-clock customer support or even set up a subscription information system for callers.



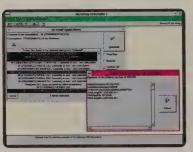
#### Time Line

This sophisticated Project Management package features an easy-to-use interface, flexible and persuasive reporting, individual resource calendars, resource leveling, schedule linking, CPM calculations and more in a spreadsheet/outline interface.



#### XTree Pro Gold

This favorite in disk management provides hierarchical file display and maintenance. You'll get easy access to your files, ZIP/ARC file compression, graphics file viewing and more in an easy-to-use environment.



#### Uninstaller

Keep your Windows clean by removing applications and all references to it. This program scours your WIN.INI, SYSTEM.INI, application INI, data files and other places to remove unnecessary files. Use it to remove DLLs, ICONs, program groups and much more!



#### Borland Turbo C++

Create C and C++
programs quickly!
Borland's latest version
includes color syntax
highlighting for more
readable code. Contextsensitive help provides
information about use and
language constructs,
including function
parameters.

Turbo Pascal TURBO-PASCL-W Win, 3-1/2" disks, 10 lbs TURBO-PASCAL DOS, 3-1/2" disks, 7 lbs	\$99.95 \$99.95
Turtle Tools for Multimedia TURTLE-TOOLS Win, 3-1/2" disks, 2 lbs	\$69.95
Typing Tutor TYPETUTOR-W Win, 3-1/2" disks, 2 lbs TYPETUTOR 2 lbs DOS, 5-1/4" & 3-1/2" disks	\$29.95 \$29.95
Ultra Mac-Games CD-MACGAMES Mac, CD, 1 lb	\$10.05
Uninstaller Windows Applications Remover	
UNINSTALLER Win, 3-1/2" disks, 2 lbs  US History	. \$49.95
CD-USHISTORY DOS, CD, 2 lbs USA War Series: Desert Storm	\$299.95
CD-STORM DOS, CD, 1 lb	\$39.95
Usenet Source Code CD-SOURCE DOS, CD, 1 lb Vietnam Remembered	\$19.95
CD-VIETNAM DOS, CD, 1 lb	
Where in the USA is Carmen San D WHERE-IN-USA 3 lbs DOS, 5-1/4" & 3-1/2" disks,	tego? . \$29.95
Where in the World is Carmen San Diego?	
CD-CARMEN DOS, CD, 1 lb	20?
WHERE-IN-TIME 3 lbs	. \$35.95
Wild Places CD-WILD DOS, CD, 1 lb	\$29.95
WildCat BBS Software WILDCAT 3 lbs	. \$99.95
10 user, DOS, 5-1/4" & 3-1/2" disks	\$199.95
Win Check-It Windows Diagnostics WIN-CHECKIT Win, 3-1/2" disks, 2 lbs	\$49.95
WinComm Pro WINCOMM-PRO Win, 3-1/2" disks, 3 lbs	\$69.95
Windows Diagnostics WIN-PROBE Win, 3-1/2" disks, 2 lbs	. \$59.95
Windows Draw!  DRAW-W3 Win, 3-1/2" disks, 3 lbs  DRAW-W Win, 5-1/4" disks, 3 lbs	. \$69.95 . \$69.95
WinFax Pro WINFAX-W Win, 3-1/2" disks, 3 lbs	
Wired for Sound WIRED-4-SND-W Win, 3-1/2" disks, 2 lbs	\$39.95
WordPerfect WORDPERFECTIVU 8 lbs	\$139.95
WORDPERFECT-W 08 lbs	\$139.95
World Atlas CD-WORLDATLAS Win, CD, 1 lb	
World Literary Heritage CD-WORLDLIT Win, CD, 1 lb	
World View Images CD-WRLDVIEW DOS, CD, 1 lb	
World Vista CD-WRLDVISTA DOS, CD, 1 lb	
World War II CD-WW2 DOS, CD, 1 lb	
Xtree Gold  XTREE-3 DOS, 3-1/2" disks, 3 lbs	
AIREL O DOO, 3-1/2 GISKS, 3-103	477773

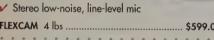
# Multimedia

Includes Stereo Microphone

#### Desktop Color Video Camera

This integrated camera and stereo microphone is specifically designed for desktop video and communications. You'll save money too, since the camera doesn't incorporate a videotape recorder. The space-saving design is ideal for use on crowded desks. When combined with the VideoBlaster, Smart Video Recorder or RocGen VGA, this camera provides a solution for producing attention-grabbing multimedia presentations!

- ✓ NTSC composite output for TV's, VCR's and video cards
- √ 1/3" color CCD camera provides 510 x 492 resolution
- High-quality f2.0 lens with ultraviolet and infrared filtering focuses from 1/4" to infinity
- Automatic white-balance and electronic exposure
- ✓ 18" gooseneck and 60 degree swivel head
- ✓ Stereo low-noise, line-level mic



#### PC Tele-VISION Plus

Add a television tuner to your computer system for additional multimedia features! This card features a built-in 119-channel tuner, so you can watch your favorite "training" videos in a sizable on-screen window. It opens up access to a wealth of information. You'll also get the ability to capture screens from your VCR or other video source, so you can integrate them into stunning multimedia presentations!



- ✓ 16-bit PC compatible ISA card
- Attaches to your VGA card's feature connector
- ✓ Software select from internal 119-channel tuner or composite video/stereo audio input
- Multimedia software compatible
- Video frame-capture mode supports WMF, Targa, PCX and TIFF file formats
- Software adjustable brightness, contrast, hue, saturation, alignment, size and position video controls, plus volume, bass, treble, balance and mute audio controls
- Complete with shielded stereo speakers, software, cables and instruction manual

PC-TV+ 6 lbs ......\$349.95

Note: Requires Windows 3.x and an input

#### Desktop Color CCD Video Camera

This desktop and monitor-top camera is ideal for video teleconferencing, video e-mail, surveillance, digital video or any other application that mandates a high-quality, affordable NTSC color camera. When combined with a full-motion video capture card, this camera helps you produce attention-grabbing fullmotion presentations.

- ✓ NTSC composite output for TV's, VCR's and video cards
- √ 1/3" color CCD camera provides 514 x 489 resolution
- ✓ High-quality f2.8 lens
- Automatic white balance, gain control and electronic shutter

TOSH-CCD 2 lbs



 Adjustable tilt base is removable and includes a tripod screw mount

....\$399.95

#### Record it Live and Play it Back on Your PC!

#### Intel Smart Video Recorder

This 'smart' system lets you record live video and insert it for playback within your Windows OLE compatible presentations! You can use your VCR, camcorder, videodisc or other video source to capture images and then play them back on your 25MHz 486SX or higher PC. This system makes it easy to enhance your business presentations with product 'how-to' demos and customer testimonials.

- 16-bit PC compatible ISA card requires Windows 3.1 and 256 or greater color VGA card with feature connector
- Accepts NTSC (U.S. Broadcast standard analog video) composite or S-VHS
- Records up to 15 frames per second (fps) in 320 x 240 window or 30 fps in 160 x 120 window
- Package includes recorder with Microsoft Video for Asymetrix Compel and MediaBlitz software

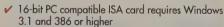


- ✓ Full-length board with RCA and S-VHS video input jack
- ✓ Includes Intel 3-year warranty

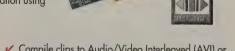
#### Multimedia in Living Color

#### Studio Perfect Multimedia Video Card

This combination of highly advanced hardware and software brings the world of digital movie-making to your PC compatible system. It incorporates a full live-motion 24-bit video display with a real-time frame-grabber, digital video recorder/player, JPÉG software video compression and Adobe Premiere. Create video presentations incorporating live, still and animated images with text, charts, voiceovers, music, superimposed images and over 30 transitions to keep the viewer's interest. Compatible with PhotoShop for manipulation using PhotoShop filters and special effects.



- Connects to standard VESA compatible VGA card feature connector
- ✓ Supports true 24-bit RGB video for up to 1024 x 768 res in 16.7 million colors
- High-resolution image capture supports zoom from 1.6% to 1,600%
- ✓ Full-motion video supports 30 frames-per-second images at up to  $1024 \times 768$

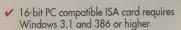


- ✓ Compile clips to Audio/Video Interleaved (AVI) or QuickTime files
- ✓ Features Ring Zero JPEG on-line video compression software
- ✓ Includes Adobe Premiere with over 30 image transitions

STUDIO-PER	3 lbs	\$499.95
PICTURE-PER	3 lbs	\$399.95
Above withou	ut Adobe Premiere	

Discovery CD 16 Multimedia Kit

This multimedia kit includes the accessories you need to properly experience today's multimedia adventures! The kit combines a doublespeed CD-ROM drive and matching Sound Blaster 16 card with a pair of matched high-performance speakers, plus an array of educational and entertaining applications. With software specifically designed to satisfy diverse ages and interests, this kit will appeal to everyone in your family!



- ✓ Double-speed CD-ROM drive reads data up to 300Kb per sec, 320ms access time
- ✓ MPC level 2 and Multisession Photo CD compatible CD-ROM is XA ready
- ✓ 8/16-bit selectable stereo sampling rates from 4KHz to 44.1KHz
- √ 16-bit real-time comp/decomp

V	20-voice,	4 operator	FM synt	hesizer
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- ✓ Microphone, stereo line-in and CD audio interfaces provide multiple inputs
- ✓ Software includes Aldus PhotoStyler SE, the New Grolier Multimedia Encyclopedia, HSC Digital Morph, Children Screen Singer, Indy 500 and more

CREATIVE

DISC-CD16 5 lbs \$429.9	5
EDIL CD14 4 lbs \$499.9	5
Above plus Rebel Assault, Links, Speed, 3-D Dinosaur Adventure, Quicken Deluxe CD-ROM and more!	

#### CD-ROM Bundles

These special prices on CD-ROM bundles are available only with the purchase of a CD-ROM drive. If purchased separately, many of the titles would cost more than the bundle!

#### Family Paks

Microsoft Encarta -Multimedia encyclopedia

allows searches on topic, category, word or phrase. Includes animations, pictures, audio and maps.

The Family Doctor - This multimedia medical reference answers questions about many conditions. Includes full-color illustrations and animations

Oceans Below - Software Toolworks' multimedia presentation explores 17 dive sites with original video footage, narration, photographs, music

Where in the World is Carmen Sandiego? Deluxe -Explore the world with the popular sleuth.

CDB-FPAK1	3 lbs	\$89.95
	O 100	\$69.95
Includes B World, Kode	usiness Politics & Media, Languages of ak Access Photo CD and Microsoft Bo	of the okshelf

#### High School Pak

Compton's Interactive Encyclopedia - This popular multimedia encyclopedia features an on-line user's guide for easier use.

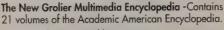
Mathematics Library - Useful 5-in-1 resource for high-school student & professional. Covers algebra, calculus, trigonometry, geometry and statistics.

Playing with Language, German - Learn the German language with challenging multimedia games. For ages 4 and up.

US History on CD-ROM - Search by word, author, subject or title for documents. From the Wright Brothers to Gettysburg, there are hundreds of documents

#### Windows Pak

Mavis Beacon Teaches Typing - Learn to type faster the Multimedia way with this popular typing instructor.



The Animals! - See and hear over 200 exotic mammals, birds and reptiles from the San Diego Zoo in over 60 minutes of video clips.

The ChessMaster 4000 Turbo - Popular chess game challenges the best players.

The US Atlas - Over 1,000 high-resolution color photos, plus state anthems and much more.

The World Atlas - Multimedia presentation of the world with sound and photos.

..... \$59.95 CDB-WINPAK 2 lbs ......

#### **Business** Pak

#### Microsoft Works -

This powerful combination of tools features word processor, spreadsheet, charting and database functions.

HALO Desktop Imager - All the basic imaging functions to manipulate up to 24-bit images in TIFF, TGA, PCX, IMG, HALO CUT, MSP, BMP and

American Business Phone Directory - 11,000,000 businesses in the United States and Canada. Search for 9-digit zip codes, get city names and more!

International Business & Economic Atlas - Over 200 detailed maps allow data overlays from topics such as agriculture, imports, population and more.

**Smart CD** - Easy-to-use software provides access to Kodak Photo CD discs. Complete with 100 Photo CD images.

CDB-BUSPAK 3 lbs ...... \$59.95

#### Now Your System Can Play FM Stereo!

#### The Radio Track FM Stereo Receiver



Listen to your favorite FM broadcast while working at your computer! This card features a clever Windows front-end that mimics a familiar automotive stereo. Simply click the appropriate button to change the volume, tune the station or choose a preset. Connect to your speakers in an office or use headphones for private listening.

✓ 8-bit PC compatible ISA card

✓ Windows software displays realistic-looking interface for intuitive feel

Features autoscan and manual tuning

- Stores up to 10 station presets like a car or home stereo
- Complete with alarm and slumber functions, plus digital clock display
- ✓ Complete with software for DOS and Windows
- Stereo 3.5mm jack provides audio output; may be connected to external line-in jack on your system's sound card

FM-STEREO 2 lbs ...... \$49.95

#### Education Pak

Compton's Interactive Encyclopedia - This popular multimedia encyclopedia features an on-line user's guide for easier use.

National Geographic's Mammals - Features photographs and full-motion clips from National Geographic TV specials, complete with authentic vocalization.

Playing with Language, German - Learn the German language with challenging multimedia games. For ages 4 and up.

Reference Library - New York Public Desk Reference, Webster's New World Thesaurus, Guide to Concise Writing, Third College Edition Dictionary and more.

CDB-EDPAK 3 lbs ......\$59.95

#### Preschool Pak

Dinosaurs! - This interactive multimedia encyclopedia features a visual directory describing era, location, features and more.

Mixed-Up Mother Goose - Locate 18 missing characters throughout the world of Mother Goose. Represented in beautiful 3D graphics and animation.

Interactive Storytime - Books come alive on a multimedia computer. Click on words or objects and hear the pronunciation.

Fatty Bear's Birthday Surprise - Interactive game for kids who are not old enough to read.

Peter and the Wolf - Interactive classic and modern children's stories feature a voice that reads along with the child. Links difficult words to an explanation, should child request.

CDB-PREPAK 3 lbs ...... \$59.95

24-Hour Toll-Free Ordering

Game Zapper

Why play Nintendo when you can use your TV with your faster, more powerful PC computer? The Game Zapper plugs into your computer's 15-pin VGA connector and converts the signal for use on your television. Use your big screen TV to play your favorite PC games, rather than your small VGA monitor! Recommended for DOS applications.





- ✓ Converts 640 x 480 images up to 256 colors
- ✔ Plugs into high-density 15-pin female VGA connector
- Composite NTSC output using RCA socket and S-Video output using female S-Video connector

#### Low-Cost Labtec Shielded Speakers

These high-quality stereo speakers make it an ideal multimedia or sound interface. You can even use them with your portable cassette or CD player! They

are shielded to protect your monitor and floppies from magnetic interference, which can distort your screen and erase magnetic data!



- 4 watts per speaker
- ✓ 4 "C" cells optionally power internal amps
- ✓ Includes 1/8" stereo headphone jack
- ✓ 3-1/2"L x 3-1/4"W x 4-7/8"H

0 1/2 2 0 1/4 17 0 11	
SPEAKERS 2 lbs	Pair \$29.95
B2C-BP 1 lb	\$7.99
B2C-BP 1 lb	
CH4C3 2 lbs	\$24.95
CH4C3 2 lbs Fast 4-cell NiCad charger	,
TR-STAR 500mA AC adaptor, 2 lbs	\$5.95

6 Watt Output Power!

#### Labtec Shielded Speakers



Tired of trying to hear your low-power speakers when your printers are at work? These 6 watt speakers feature more power, bass boost, treble and volume control for better sound reproduction.

- 6 watts per speaker for better fidelity
- Magnetic shielding reduces monitor interference and data loss
- ✓ Frequency response from 50Hz to 15,000Hz
- √ 1/8" stereo headphone jack
- ✓ Includes 110VAC power adaptor

CS-800 4 lbs	
CS-1000 6 lbs	<b>\$79.95</b> itor

#### PC to TV\* Converter Box

Bring the dynamic dimension of multimedia video to your presentations. This compact unit converts your VGA output so that you can connect to a big-screen TV or other NTSC monitor. Use it to videotape a presentation using your VCR, so you can play back the presentation without a computer. This external converter is especially useful for notebook and laptop users, since it simply plugs into the VGA output of your computer.

- ✓ Supports Windows 3.0 and higher; compatible with all VGA cards
- ✓ Supports all IBM standard modes up to 640 x 480 Hi-Color (NTSC)
- Simultaneous display on both VGA and TV monitors
- ✓ TV auto blanking & brightness control

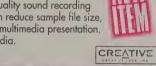


- ✓ Built in flicker filter
- ✓ Includes Acteon 2.5SE presentation software and 6' S-Video cable
- ✓ Input: VGA DB 15 pin connector; Output: Composite video, S-Video, Video RGB (15KHz) & VGA RGB (31 KHz)

\*Note: Outputs S-video and composite video for use with TV or video recorder

#### Creative Labs Sound Cards

Sound Blaster cards produce reduced-distortion 16-bit sound for CD-quality sound recording and reproduction. The models with sound compression/decompression reduce sample file size, allowing longer, more complex sequences to easily integrate into your multimedia presentation. Each card includes a selection of software to get you started in multimedia.





- ✓ Economical 8-bit sampling for games
- √ 8/16-bit selectable stereo sampling rates from 5KHz to 44.1KHz
- ✓ Supports Creative Labs CD-ROM drives

	16-bit interface features 20 voices	Ş117.73
California de la constanta de	SB-DLX 2 lbs	\$69.95



- ✓ Complete with SCSI-2 interface and Adaptec EZ-SCSI software
- ✓ 16-bit real-time software comp./decomp.
- √ 8/16-bit selectable stereo sampling rates from 5KHz to 44.1KHz

SB-16SCSI2	3 lbs	\$249.95
SB-16SCSI2-	ASP 3 lbs	\$299.95



- ✓ CD interface supports Sony, Mitsumi and Creative Labs CD-ROM drives
- 8/16-bit selectable stereo sampling rates from 5KHz to 44.1KHz
- ✓ 16-bit real-time software comp./decomp.

SB-16MCD	3 lbs	\$199.95
SB-16MCD-	ASP 3 lbs	\$229.95
Above with	ASP hardware comp /decomp	



- 16 channels, 128 instruments, 32-voice polyphony and 6 drum kits
- Programmable effects engine features reverb, chorus and QSound
- ✓ Interfaces for Sony, Mitsumi and Creative Labs CD-ROM drives
- ✓ 512Kb RAM on board, expandable up to 28Mb using two 1M x 9, 4M x 9 or 16M x 9 80ns SIMMs

**SB-AWE32** 4 lbs ......\$299.95

#### Labtec Microphone



sounds in presentations, as audio notes in your

Tech Tip

Do you want to make a video presentation that integrates slides or animation from your computer's screen? To record the screens, simply add the VGA-NTSC to your computer. It converts your VGA monitor's signals to a form your VCR can record. Simply duplicate the video to distribute to others!

# Systems

#### A Low-Cost 33MHz 386SX System



PC includes monitor, keyboard, mouse and DOS

Sure, it has a low price tag on it, but don't let that fool you! While today's 486's are the choice for powerful applications, the power of the 386SX was only dreamed of a few short years ago. You'll be surprised with the features included in this complete 33MHz 386SX system. It features a 210Mb hard drive for your storage-hungary applications and a case with five drive cutouts for future upgrades! Start computing affordably now, then add components as your pocketbook and requirements demand. There's plenty of room for additional hard drives, tape backup and CD-ROM!

- ✓ 33MHz 80386SX CPU
- ✓ 2Mb RAM installed, expandable to 16Mb on-board using 256K x 9, 1M x 9 or 4M x 9 80ns SIMMs; 2 of 4 SIMM sockets are vacant
- ✓ 210Mb 16ms IDE hard drive with 32Kb cache
- ✓ 1.44Mb 3-1/2" floppy drive
- 14" 640 x 480 VGA monitor with 0.39mm dot pitch
- ✓ 16-bit VGA card with 256Kb RAM installed displays up to 16 colors
- ✓ Six 16-bit ISA bus slots; four are vacant
- ✓ 2 serial ports with 1 vacant, 1 parallel and 1 game port
- ✓ 230 watt U/L approved power supply for safety, 110/220VAC, 50/60Hz input
- ✓ 101-key enhanced layout keyboard
- ✓ MS-DOS 6.22 installed and preconfigured
- Includes 3-button mouse, power cords and monitor

	70 lbs	\$899.00
Landmark 32 3	Norton SI 18 8	

#### Custom Configuations - No Problem!

Thumb through our catalog and discover how easy we make custom configurations! JDR stocks over 5,000 products in our own warehouse, not at a distributor's facility, so we can promptly and efficiently respond to your needs!

Simply call us with your requirements, and our trained, experienced representatives will gladly recommend the components and accessories best suited for your application. We'll install each product and configure the system for you, so when you receive it, just plug the system in and boot it up! Since your specific configuration will affect completion, please call a sales representative for shipping information.

Memory         4Mb to 8Mb         add \$184           4Mb to 16Mb         add \$536	
Tape Back-Ups           CMS 120Mb Int Tape Drive         add \$100           CMS 250Mb Int Tape Drive         add \$170	
CD ROM Single Speed Internal	
Hard Drives 260Mb 16ms to 340Mb 14msadd \$30 340Mb 14ms to 520Mb 12msadd \$100	



Accelerators STB VL24	. add \$10
Diamond Viper VLB	add \$260
Upright Case With 250 watt P/S upgrade	add \$100

#### Fast Shipping

less waiting! Overnight delivery is also available for those in a real pinch.

#### Printer Bundle



This Printer Bundle is ideal for any new workstation. You'll get a reliable Epson letterquality 24-pin printer, a power-surge suppressor to protect your investment and the supplies you need for most computing activities. This convenient, money-saving JDR Bundle is only available with the purchase of a JDR Computer System; one bundle per system.

- ✓ Reliable Epson LQ-570+ 24-pin Letter Quality printer
- 6-ft. printer cable
- ✓ Power-surge suppressor and power cable to turn your peripherals on/off with your PC
- ✓ 10 high-density 3-1/2" 1.44Mb diskettes plus a high-impact plastic diskette organizer

JDR-PRINT 22 lbs ...... \$259.95\*

\*Only available with the purchase of a JDR PC

#### Dual-Speed Multimedia Bundle



Adding multimedia capability to your system? We'll install a dual-speed CD-ROM drive and the other internal components for you. Your new multimedia system will be ready to run when it arrives at your door! This JDR package is only available with the purchase of a JDR Computer System; one package per computer system.

- ✓ MPC and Kodak multisession Photo CD compatible internal drive with 300Kb/sec maximum transfer rate
- 16-bit CD-ROM interface card for fast data transfer
- ✓ SoundBlaster and AdLib compatible sound card includes 2 shielded speakers

JDR-MM2 8 lbs ...... \$279.95\*

\*Only available with the purchase of a JDR PC

#### 60MHz and 90MHz Systems with PCI



Upright case and 5-1/4" 1.2Mb floppy drive available for systems

Tackle all of the data you can acquire in the information-rich era with the powerful Pentium™ Processor. These systems feature Intel's fifth-generation processor, with advanced memory management, superscalar architecture and much more.

To realize the power of this system, just compare the Landmark and Norton SI benchmarks to our 486 systems. With over 2.3 times the computing power, you'll be ready for complex desktop publishing, intergalactic number crunching and much more.

To further enhance the systems, we've included the PCI Local Bus interface. Many buyers prefer this 32-bit bus over the others. And the 90MHz system also includes two VESA Local Bus slots for those who require more options for their future expansion.

- ✓ 60MHz and 90MHz Intel Pentium Processors
- 8Mb RAM installed, expandable to 128Mb onboard using 1M x 36, 2M x 36, 4M x 36 or 8M x 36 70ns SIMMs; 2 of 4 SIMM sockets are vacant
- ✓ 256Kb cache memory
- ✓ 60MHz system includes 426Mb 14ms IDE hard drive with 120Kb cache

- ✓ 90MHz system includes 540Mb 12ms IDE hard drive with 256Kb cache and VL Bus interface
- ✓ 1.44Mb 3-1/2" floppy drive
- ✓ 14" non-interlaced ADI MicroScan 3E 1024 x 768 Super VGA monitor with 0.28mm dot pitch for sharp, crisp graphics
- 32-bit PCI Bus video card with Windows accelerator chip set displays 256 colors in 1024 x 768 resolution
- 5 of 7 bus slots are vacant, two are PCI; 90MHz includes one additional PCI slot
- 2 serial ports with 1 vacant, 1 parallel and 1 game port
- 230 watt U/L approved power supply for safety, 110/220VAC, 50/60Hz input
- 101-key enhanced layout keyboard
- MS-DOS 6.22 and Windows for Workgroups 3.11 installed and preconfigured
- ✓ Includes 3-button mouse, power cords and monitor

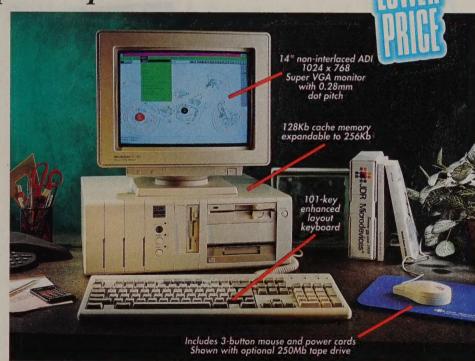
**JDR-P586-60** 70 lbs .......\$2199.00 60MHz version, Landmark 350, Norton SI 191

## VESA Local Bus 486 System Brings Fast Performance for Complex Graphics!

When it comes to graphics-intensive applications, does your ordinary 486 seem sluggish, if not outright asleep? Our VESA Local Bus systems put the pedal to the metal with outstanding performance. It's all thanks to the one-two combination of Intel's powerhouse 66MHz 486DX2 and the swift throughput of the economical VESA Local Bus. This express lane provides a 32-bit data path for your compatible I/O cards, hurling data through intensive operations like graphics screen updates. We've also included a VL Bus video adaptor with a graphics accelerator chip set for faster video response.

To display all this sizzling speed in sharp, dazzling color with minimal flicker, you get a digital non-interlaced ADI 1024 x 768 SVGA monitor with 0.28mm dot pitch. For your storage-starved applications, our 66MHz systems now feature a 340Mb 14ms drive connected through a VL Bus interface. We've also preinstalled MS-DOS 6.22 and Windows for Workgroups 3.11! So just plug it in and get started!

- ✓ 66MHz 80486DX2, 33MHz 80486DX or 33MHz 80486SX CPU
- 4Mb of RAM expandable to 32Mb on-board using 256K x 9, 1M x 9 or 4M x 9 70ns SIMMs; 4 of 8 SIMM sockets are vacant
- ✓ 128Kb cache memory expandable to 256Kb
- ✓ 33MHz systems use 260Mb 16ms IDE hard drive with 64Kb cache and VL Bus interface
- ✓ 66MHz systems use 340Mb 14ms IDE hard drive with 120Kb cache and VL Bus interface
- ✓ 1.44Mb 3-1/2" floppy drive
- 14" non-interlaced ADI MicroScan 3E 1024 x 768 Super VGA monitor with 0.28mm dot pitch and digital controls
- ✓ 32-bit VESA Local Bus video card with Windows accelerator chip set displays 256 colors in 1024 x 768 mode



- ✓ 6 of 8 bus slots are vacant; each is 16-bit
- 2 serial ports with 1 vacant, 1 parallel and 1 game port
- 230 watt U/L approved power supply, 110/220VAC input
- MS-DOS 6.22 and Windows for Workgroups 3.11 installed and preconfigured
- ✓ Includes 3-button mouse and power cords

#### Systems

Epson ActionNote 4SLC2-50

Monochrome Notebook

This 5.5 pound computing package features a 50MHz clock-doubled 486SLC2 CPU. This combination of CPU power and compact, energy-saving design result in a system you only dreamed of having on your desktop a few years ago! Only back then, you probably never considered carrying such power in your briefcase!

This system includes a 260Mb hard drive to store your data and applications. If your requirements include communicating with the home office or sending faxes, you'll appreciate the built-in fax/modem card. This ready-to-run system includes a full 4Mb of RAM to run your Windows applications, plus the popular Logitech TrackMan Portable, to help you point quickly and effortlessly. For your convenience, MS-DOS 6.22 and Windows 3.1 are installed and preconfigured.

- ✓ Clock-doubled 50MHz 486SLC2 CPU
- ✓ 4Mb of RAM installed, expandable to 8Mb
- 260Mb 17ms IDE hard drive and 1.44Mb floppy drive
- ✓ 10" monochrome LCD screen with 32 gray-scale 640 x 480 resolution, back-light, brightness and contrast controls
- ✓ Internal 2400 baud modem with 9600 send/receive fax



- ✓ NiCad battery included
- ✓ Convenient snap-on Logitech TrackMan trackball and carrying case included
- MS-DOS 6.22 and Windows 3.1 installed and preconfigured
- √ 1-3/4"H x 11"W x 9"D notebook weighs 5.5 lbs

**EPSON** 

**EPSON** 

### - 500C

Epson ActionNote 500C
Color Notebook
This 256 color notebook system is designed to handle your color graphics applications. Whether it's a last minute update for your presentation or a just a document that needs to be produced, this

presentation or a just a document that needs to be produced, missystem will help you achieve your goals. If you frequently fax or modem data while you're on the road, the fax/modem will keep you communicating. When you're traveling, plug into a modular phone cord and you're ready to communicate with your associates.

The ActionNote 500C is an intelligently and elegantly designed notebook computer system, ready to tackle your challenging applications. Equipped with a 260Mb hard drive and 4Mb of RAM, this little powerhouse is ready the moment you open it. MS-DOS 6.22 and Windows 3.1 are installed and preconfigured, so that first start-up is quick and easy!

- ✓ Clock-doubled 50MHz 486SLC2 CPU
- ✓ 4Mb of RAM installed, expandable to 8Mb
- ✓ 260Mb 15ms IDE hard drive and 1.44Mb floppy drive
- 8.2" SimulScan LCD screen with 256 colors, 640 x 480 resolution, backlight, brightness and contrast controls
- ✓ Internal 14,400 baud modem with 14,400 send/receive fax
- NiCad battery included; NiMH battery Pack sold above right
- ✓ Convenient snap-on Logitech TrackMan trackball and carrying case included
- ✓ MS-DOS 6.22 and Windows 3.1 installed and preconfigured
- ✓ 1-3/4"H x 11"W x 9"D notebook weighs 5.5 lbs

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800-538-5000

**Toll-Free Technical Support** 

800-538-5002

#### **Epson Notebook Accessories**

4Mb RAM Upgrade for 500C A881251	. \$279.95
4Mb RAM Upgrade for 4SLC2- A880441	50 . \$479.95
NiCad Battery Pack A880451	\$74.95
NiMH Battery Pack for 500C	. \$139.95
14,400 Baud Int. Fax/Modem A881141	\$299.95
Cigarette Lighter Adaptor	\$149.95
External Numeric Keypad A881331	\$69.95



A large percentage of a phone company's employees use laptop PC's as their only PC. The laptops, which have been purchased in increasing volume over the last three years, come from many different manufacturers and are mostly 486 based. Color displays outnumber monochrome by at least 4 to 1.

The thing that I found most interesting about the laptops was who was happiest with their computer, and what made one computer more desirable than another.

In an area where most people have 486's, nobody I talked to liked their 386 based PC regardless of hard disk size, memory capacity or screen type. Slow is slow and most of these people are running OS/2.

Of those who had the 486's, the most important factor seemed to be hard disk capacity followed by screen type. It doesn't seem to matter whether the 486 is an SX-25

or a DX2-50.

Curiously, at least to me who always wants a faster PC, most of the people who had color had no interest in a new laptop. Few wanted to endure the hassle of transferring their data and learning the feel of a new PC. The mono screens however, were quite anxious to get on the list when they learned they might be upgraded.

The common complaint was the inability to distinguish between applications on a busy desktop, and the fact that warnings and notices just didn't have the same impact when rendered in a grey scale.

The size of the hard disk, though important, didn't motivate people very much either, because they knew they could always get a bigger disk.

#### 3 Ways Systems from JDR Are Better

#### Testing - More Than Burn-in



We test the functionality, speed and true parity of each SIMM before we install it!

At JDR, we think we test our products better. We prefer to use the same components we thoroughly test for our catalog. Since the parts are PC compatible, you're not locked into one company that charges exorbitant prices and forced into spending too much money or buying a new system.

When a new configuration is considered, we use Microsoft's Hardware Compatability Tests to verify compatibility with DOS and Windows. This thorough testing simply reduces the chance of quirks appearing

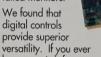
On the hardware side, we take the time to test every SIMM before we assemble the system. Some unscrupulous vendors knowingly sell SIMMs that don't quite pass industry-standard requirements. These flawed parts may not cause immediate problems, but they have a tendency to create havoc at the worst possible moment. We even assemble our computers in-house to maintain the tight control. Some of the lowest-priced vendors lack this control because they contract other companies to assemble their systems, frequently over-seas.

#### Monitors Worth Looking At

Since you spend a lot of time looking at your computer's screen, we want you to get the most comfort for your dollar! There's a lot more to monitor quality than resolution and screen size.

To prove that point, we put over 40 monitors to the test. Each monitor simultaneously displayed images generated by a single PC, allowing us to directly compare color,

pin-cushion, brilliance and more. After running continuously for a month, we eliminated all the failed monitors.



Digital monitors provide greater versatility! have to switch from one graphics mode to text or another resolution, analog controls usually require tedious adjustments before the image is centered and usable. With digital controls, your image is quickly adjusted!

Notebook displays are also important to consider. We do not sell color notebooks with true passive LCDs. Although they are less expensive, the colors are poor and the screens lack brilliance.

#### Smart Design

Have you ever considered upgrading your current system and decided it was too difficult? Systems bought from JDR feature plenty of room for future drive and card upgrades. Our desktop



Our desktop cases feature 5 exposed drive slots and 2 more internal slots for future upgrades!

cases feature five exposed slots so you can add a tape drive, a CD-ROM drive, a PCMCIÁ drive and whatever new technology comes along. Compared to some of our competitors, we give you more than twice the number of exposed slots!

To short-sightedly reduce costs, some manufacturers also integrate controllers for hard drive, video, floppy drive and I/O functions on the motherboard. These motherboards generally have fewer slots available, so expansion can be limited. In addition, if one of the functions fails, you may have to replace the entire motherboard! The repair costs could be staggering!

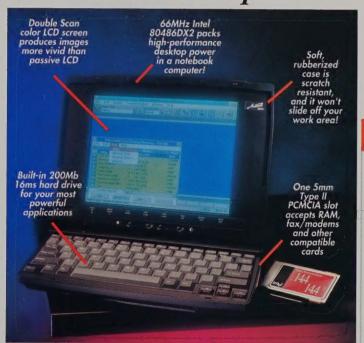
Another downfall relates to custom configurations. If your requirements include a Diamond Stealth video card or a SCSI-3 controller, then the manufacturer will have to disable the integrated functions and install the appropriate cards. You'll end up paying for both the disabled function and the additional card! With our systems, we simply exchange the card with its replacement, and you only pay for what you need!

#### 66MHz 486DX2 Color PCMCIA Notebook Computer

This powerhouse 66MHz 486DX2 notebook computer features a Double Scan LCD display, which provides more vivid color than a standard passive display. By using the 66MHz Intel 80486DX2 CPU, this system is fully capable of producing results as quickly as your office system. A Cirrus Logic Windows Accelerator, connected via a local bus, provides maximum video performance. The PCMCIA slot allows you to add other peripherals as necessary. Plug in a credit card sized fax/modem, RAM drive or other compatible interface and you're ready to go!

When you're back in the office, plug a PS/2 compatible keyboard and 1024 x 768 monitor into your system and continue working — with the power and hard drive capacity of this system, there's no need to copy your files to a more powerful office system!

- ✓ 66MHz Intel 80486DX2 CPU
- ✓ 4Mb RAM installed, expandable to 36Mb
- ✓ One 5mm Type II PCMCIA slot
- 200Mb 16ms IDE hard & 1.44Mb FD
- ✓ 9.5" Double Scan LCD screen with 256 colors, 640 x 480 resolution, backlight, brightness and contrast controls
- ✓ Cirrus Logic GD6440 local bus Accelerator with 1Mb VRAM
- ✓ Ports for external trackball, PS/2 keyboard, serial, parallel and analog VGA monitor
- MS-DOS 6.22, Windows 3.1 and Magic Cursor software installed and preconfigured
- √ 2-3/8"H x 11-1/4"H x 8-3/4"D, weighs 6.5 lbs
- NiMH battery supports Advanced Power Management specification





#### Space-Saving Patented Hinge!



BCC Avanti notebook computers include a unique space-saving hinge. Since the back of the computer slides forward, less depth is required. This makes these notebooks ideal for use in cramped areas like airline seats.

#### BCC Avanti 660C Accessories

BCC-CASE-C	Cordura Case	\$39.95
	Leather Case	
	4Mb RAM Upgrade	
BCC-16MB	16Mb RAM Upgrade	\$1295.00
BCC-NIMH	Additional NIMH Battery	\$149.95
	Additional AC Adaptor/Charger	
BCC-AUTO	Automobile Power Adaptor	\$49.95
BCC-APPOINT		\$69.95

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#### Leap to 100MHz 486DX4 Performance!



#### intel.

For the fastest performance from your existing 33MHz 486 motherboard, simply plug Intel's latest and fastest processor in the family into your existing motherboard.

BOXDX4ODPR100 1 lb	\$529.00
Replaces 33MHz 486SX or 486DX C	PU with 100MHz
OverDrive	
BOXDX4ODP100 1 lb	
Plugs into 33MHz 486SX or 486DX (	OverDrive socket

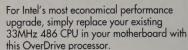


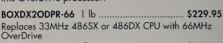
#### Boost Performance to a 75MHz 486DX4!

For the fastest performance from your existing 25MHz 486 motherboard, simply plug this processor into your existing motherboard.

BOXDX4ODPR75	1 lb	\$439.9
Replaces 25MHz	486SX or 486DX	CPU with 75MHz

#### Upgrade to a 66MHz 486DX2!





BOXDX2ODP-66 1 lb \$229.95 Plugs into 33MHz 486SX or 486DX OverDrive socket



# Upgrade to a 50MHz See Page 14 486DX2!

Plug this processor into your 25MHz 486 motherboard for 50MHz 486DX2 processing power! Works with 486SX and 486DX processors.

BOXDX2ODPR-50 1	lb \$169.95
Replaces 25MHz 486	6SX or 486DX CPU with 50MHz
OverDrive	
	b \$169.95
Plugs into 25MHz 48	6SX or 486DX OverDrive socket

BOXSX2ODP-50 1 lb.....\$119.95 Plugs into 25MHz OverDrive socket, converts to 50MHz 486SX2

Increase Your Throughput and Save!

#### Internal 14,400 Bps Fax/Modem

See Page 25



#### **MODULAR CIRCUIT TECHNOLOGY**

MCT's modem transfers data up to 24 times faster than a 2400 bps modem! At maximum transfer speeds, a \$40 phone bill using a 2400 bps modem costs a mere \$1.69 using this one! Includes V.42bis and MNP5 data compression plus V.42 error control built in the hardware for faster transmission and reduced connect times. It sends and receives faxes at up to 14,400 bps!

MCT-144IF+ 3 lbs ......\$99.95

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A complete assortment of Verbatim floppies and tapes is available on page 34

Buy a box of preformatted Verbatim 3-1/2" 1.44Mb disks and you'll receive two more FREE! There is no rebate of card to send in — the FREE floppies are right in the box! Just order the part number below and you'll automatically receive the bonus through January 31, 1995.

V-87410 1 lb ...... \$9.95

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Corners!

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